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Supreme Court, U.S.
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IN THE

Supreme Court of the United States

WILLIAM A. BUDDE, PETITIONER

v.

HARLEY-DAVIDSON, INC. AND
HARLEY-DAVIDSON MOTOR COMPANY

PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Does the constitutional right of "due process" include the right to require that the Court of Appeals for the Federal Circuit (CAFC) follow its own final appellate decision in a Markman claim construction in a later appeal from a Federal District Court summary judgment Ruling on patent infringement?

2. Does the constitutional right of "due process" include the right to preclude a Federal District Court from: 1) ignoring an earlier appellate decision on a Markman claim construction handed down by the CAFC, and 2) changing the claim construction established as the "law of the case" in the prior CAFC decision in a Ruling on a summary judgment motion?

PARTIES TO THE PROCEEDING

Pursuant to Rule 14.1(b), the following list represents all of the parties before the United States Court of Appeals for the Federal Circuit Circuit.

William A. Budde, hereinafter "Budde" was the Plaintiff in the United States Court of Appeals for the Federal Circuit and is the Petitioner in this petition and is represented by:

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Harley-Davidson, Inc. and Harley-Davidson Motor Company, hereinafter collectively "HD" were Defendants in the United States Court of Appeals for the Federal Circuit and are respondents in this petition are represented by:

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The opinion of the Court of Appeals for the Federal Circuit (CAFC) dated October 5, 2004, not designated for publication, appears in the APPENDIX, pages 1a through 10a, to this petition. A Combined Petition for Panel Rehearing and Rehearing En Banc was filed on October 19, 2004. The Combined Petition was denied on November 15, 2004 and is found in the APPENDIX at pages 98a through 99a.

STATEMENT OF JURISDICTION

The jurisdiction of this Court is invoked under 28 U.S.C. § 1254, which states in part:

> "Cases in the courts of appeals may be reviewed by the Supreme Court by the following methods:
>
> (1) By writ of certiorari granted upon the petition of any party to any civil or criminal case, before or after rendition of judgment or decree; ..."

CONSTITUTIONAL PROVISION INVOLVED

Amendment V - Trial and Punishment, Compensation for Takings guarantees that no person shall be deprived of property without due process of law:

> "**No person shall be** held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be **deprived of** life, liberty, or **property, without due process of law**; nor shall private property be taken for public use, without just compensation." (Bolding added)

STATEMENT OF THE CASE

For William (Billy) Budde, his whole life has been about riding and customizing motorcycles, particularly Harley-Davidson (HD) motorcycles. Mr. Budde started riding at age 12, finished only 9th grade, was a champion rider by age 18, and until his recent divorce and loss of his motorcycle shop, invented and developed customized features for HD motorcycles. He and co-inventor, Floyd Knapp, made the patented invention in 1989 and U.S. patent 4,955,348 ('348 patent) issued in 1990, covering electronic fuel injection for Harley-Davidson V-twin engine motorcycles. In the early '90s Mr. Budde was unsuccessful in his attempts to get the attention of motorcycle behemoth HD to license the '348 patent. They essentially refused to deal with him, figuring they could crush him.

In January 1995 HD commenced selling V-twin engine motorcycles which infringed the '348 patent. In June 1997, Mr. Budde commenced a suit for patent infringement against HD in the Federal District Court for the Northern District of California. Although the case was originally brought in Oakland, CA, the case was transferred to San Jose, CA onto the docket of District Court Judge Jeremy Fogel.

A Markman claim construction was issued by the District Court on January 29, 1999. (APPENDIX, pages 81a-97a.) That construction was appealed to the CAFC, and on appeal the Districts Court's claim construction was amended by the CAFC on May 24, 2001. (APPENDIX, pages 11a-38a.) Reconsideration was requested by HD and denied, and the final appellate decision consisting of a complete claim construction of the single claim in suit was sent back to the District Court for further proceedings.

In 2003 Cross Motions for Summary Judgment relating to patent infringement were filed by the parties. The District Court ruled on those motions in July 2003 granting HD's Motion and denying Mr. Budde's Motion (APPENDIX, pages 39a-80a). The District Court, in ruling on the Summary Judgment Motions, ignored the prior claim construction in the CAFC 2001 decision and changed and re-construed the claim. Further, in ruling on infringement, the District Court took the accused infringing fuel injection systems into consideration in rewriting the claim, and as to one element, stated that there was ambiguity on the question of equivalence, even though in the original claim construction affirmed in the first appeal, no ambiguity was found as to the element in question.

On appeal for the second time, without a trial on the merits, the CAFC on October 5, 2004 affirmed the District Court's Ruling on summary judgment on non-infringement (APPENDIX, pages 1a-10a), finding that the District Court merely "clarified" its earlier claim construction, rather than having actually changed and reversed the claim construction. Mr. Budde filed a Combined Petition for Panel Rehearing and Rehearing En Banc on October 19, 2004. The CAFC denied Budde's Combined Petition for Rehearing and for Rehearing En Banc on November 15, 2004 (APPENDIX, pp. 98a-99a).

After almost eight years of litigation, without a trial on the merits, Mr. Budde's financial problems are so severe due to the legal fees he has incurred in this case, he may have to file for bankruptcy.

The record of Markman appeals in the last several years shows reversals by the CAFC almost half the time.[1] (See APPENDIX., pages 100a-124a) It seems that the time is ripe for the Supreme Court to lend some clarity to what the standards are for Markman claim constructions. This Court needs to make clear when a claim construction becomes final in a case, so that the parties do not have to struggle with a case in which the District Court and CAFC turn claim construction into a continually moving ping-pong ball back and forth between them, without the parties having an opportunity to go to trial. On February 8, 2005 the en Banc Federal Circuit heard oral argument to consider the proper way to interpret patent claims in light of the specifications to correctly determine their limitations. Phillips v. AWH Corp., Fed. Cir., No. 03-1269. There is disarray as to what constitutes proper Markman methodology.

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[1] Mark T. Banner, Chair of the Intellectual Property Section of the ABA states in the IPL Newsletter, Summer 2003, Vol. 21, No. 4: "Nothing I have written this past year generated as much mail as the article proposing a review of the *Markman* process." Letters, e-mails, and comments came from members of the user community, district court judges, individual inventors, and colleagues in the outside bar. ... Federal Circuit judges, academics, and even clerks of court had debated and written about the reversal rate, some suggesting a rate as high as 47 percent ... the reversal rate on claim construction for the first six months of 2003 is 48 percent ... A thorough study of this situation cannot be done too soon. The *Markman* procedure is broken. The analytical framework is confusing and the results are confounding. The lack of predictability is not serving the patent system well. ...Today, the uncertainty inherent in the manner in which *de novo* review of

The Budde case provides the Supreme Court a unique opportunity to provide more detailed guidelines on the requirements, standards and law relating to Markman claim constructions provided by District Courts and the appeal of such constructions to the CAFC. In this case, Mr. Budde was denied due process because of the continual changing of the Markman claim construction by both the District Court and the CAFC, even though it had been finalized in the first decision of the CAFC in 2001. A District Court claim construction

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Markman rulings takes place has created a widely held belief in the business and user community that the outcome of patent cases cannot be determined until after the Federal Circuit has ruled on claim construction. The Federal Circuit, the argument goes has created a morass of confused and contradictory claim construction canons. ... We need to find a way to make the *Markman* process more predictable. ... We need to fix the law of claim construction." (Emphasis added) Exhibit A is his findings.

followed by a final construction by the CAFC should fix claim construction for the remainder of the case, with no prerogative in the District Court or the CAFC to change the "law of the case" claim construction. The claim construction handed down by the CAFC should be final and not subject to change by the District Court or the CAFC. Claim construction is an issue which the parties should neither be allowed multiple bites of the apple nor subjected to multiple constructions. One claim construction by the District Court, finalized on appeal by the CAFC, should be sufficient.

Instead of our judicial institutions giving him a fighting chance, Mr. Budde finds himself harpooned by two contradictory appellate decisions by the CAFC on claim construction of his single claim at issue. Surely this result is not what was contemplated by Markman and is more than any party can stand or to which he/she should be subjected. Accordingly Mr. Budde has filed this Writ of Certiorari.

REASONS FOR GRANTING THE PETITION

I. THE FEDERAL CIRCUIT FAILED TO APPLY THE "LAW OF THE CASE" DOCTRINE

Budde asserts the facts of this case and his fundamental constitutional guarantees should have required both the District Court and the CAFC to apply the "law of the case" on claim construction as decided in the first decision by the CAFC in 2001. This Court in Agostini v. Felton, 512 U.S. 203 (1997), at 236, discussed the requirements of the "law of the case" doctrine stating:

> "Under this doctrine, a **court should not reopen issues decided in earlier stages of the same litigation**. *Messenger* v. *Anderson*, 225 U.S. 436, 444 (1912). The doctrine does not apply if the court is 'convinced that [its prior decision] is clearly erroneous and would work a manifest injustice.' *Arizona* v. *California*, 460 U.S. 605, 618, n. 8 (1983). In light of our conclusion that *Aguilar* would be decided differently under our current Establishment Clause law, we think adherence to that decision would undoubtedly work a 'manifest injustice,' such that the law of the case doctrine does not apply. Accord, *Davis* v. *United States*, 417 U.S. 333, 342 (1974) (Court of Appeals erred in adhering to law of the case doctrine despite intervening Supreme Court precedent)." (Emphasis added)

Neither the District Court nor the CAFC discussed "manifest injustice". Budde was not advised that the District Court considered that its prior Markman decision was clearly erroneous and, therefore, was working a manifest injustice. HD did not advance such an argument.

The District Court's original claim construction order in 1999 ruled:

> "The third disputed term is a 'pair of fuel injectors mounted in a fuel injector and throttle body secured to [the] intake manifold.' Budde argues that this

> language is clear on its face and that it requires that two fuel injectors be mounted in a body referred to as a 'fuel injector and throttle body.' Harley-Davidson argues that this claim element requires a throttle body injection system, as opposed to a port injection system. However, **neither the claims nor the specification include reference to 'throttle body injection' or 'port injection.' Therefore, a proper interpretation of this term need not require any particular type of fuel injection system. Rather, the language of this claim simply requires that two fuel injectors be mounted in a fuel injector and throttle body.** The language of this claim element further requires that the fuel injector and throttle body be secured to the intake manifold." (APPENDIX, pages 87a and 88a, January 29, 1999 District Court Claim Construction Order.) (Emphasis added).

Neither HD nor Budde appealed the District Court's claim construction on the location of the fuel injectors, and the CAFC in the first appeal made no change to that construction. In fact, the CAFC said in its 2001 decision:

> **"The parties do not dispute the district court's construction of the following claim limitations: ... (3) pair of fuel injectors mounted in a fuel injector and throttle body ..."** 250 F.3d

> 1369, 1376 (APPENDIX, page 22a) (Emphasis added).

HD was therefore judicially estopped from even raising this argument after it had been fully settled by the 2001 CAFC appellate decision. But on remand, HD renewed its previous arguments before the District Court, and the District Court in its 2003 Ruling improperly found that the "parties disagree as to what type of body qualifies as a 'fuel injector and throttle body.'" (APPENDIX, page 55a.) The District Court then essentially reversed its own earlier 1999 claim construction, ignoring the 2001 CAFC appellate decision, and concluded:

> "The **limitation is ambiguous** and neither of the parties' positions is entirely satisfactory." (APPENDIX, page 56a.) (Emphasis added).

The District Court found the language perfectly clear in 1999, but in 2003, four years later, found the language ambiguous in light of the same rejected arguments presented by HD that its fuel injectors are located slightly closer to the cylinders than to the throttle butterfly valve. As originally pointed out and construed by the District Court, nothing in the claim language or specification referred to any type of fuel injection system, and under the doctrines of law of the case and judicial estoppel, the District Court committed reversible error in finding "ambiguous" that which it previously found unambiguous. Nor did the District Court conclude that a "manifest injustice" compelled a departure from the settled claim construction. Clearly, both HD's Original and New EFI Systems satisfy this claim element based on the original 1999 claim construction by the District Court and affirmed by the CAFC in 2001.

See APPENDIX, pages 125a and 126a, of White Expert Report which show images of both Budde's fuel injectors mounted in the fuel injector and throttle body integral with the intake manifold (page 125a) and the corresponding views of the HD fuel injectors and their throttle body and intake manifold. The only difference between HD's Original EFI System and New EFI System is that in the New HD EFI system, the throttle body and intake manifold are two pieces secured together, as opposed to the one piece construction of the Original EFI system (page 126a).

The District Court's 1999 Ruling, upheld by the CAFC on the first appeal in 2001, found that the type of fuel injection system was not in issue, as it was not even mentioned in the '348 patent. The District Court's so-called clarification is really a misnomer for what has really occurred here, which is a complete reversal and reconstruction of the District Court's 1999 claim construction Ruling, which Ruling was upheld by the CAFC in 2001 and became the law of this case. Based on the 2001 CAFC appellate decision, the type of fuel injection system was not even in issue. For the District Court to completely reverse itself in the summary judgment Rulings on infringement in 2003 by finding that the location of the fuel injectors has become a critical element in claim 1, violates the "law of this case" as enunciated by the CAFC in its own 2001 appellate decision. Surely the affirmation of this 180-degree reversal of its own 2001 decision in the CAFC's 2004 appellate decision is a miscarriage of justice. In essence, Budde has been hit by a "rolling" Markman claim construction, whereby the District Court and CAFC change claim construction, denying the parties their day in court on the settled 2001 CAFC claim construction. Surely, this is "manifest injustice"!

In addition, the District Court reached its 2003 Ruling on HD's motion for summary judgment of non-infringement by reading the language in claim 1 regarding the pair of fuel injectors in light of the accused HD devices. This practice is clearly not in concert with long-standing case law that in construing claims, the accused devices are not to be considered. The District Court violated the fundamental principle of claim construction that courts may not interpret claims with an eye to the infringing device. See, Moba, B.V. v. Diamond Automation, Inc., 325 F.3d 1306, 1312-14 (Fed. Cir. 2003). This departure by the District Court tainted that court's revisiting of claim construction and speaks legions why the settled claim construction following the 2001 CAFC decision should have been treated as the "law of the case" as Judge Fogel himself had acknowledged during the June 23, 2003 oral argument on the parties' Cross-Motions.[2] (See APPENDIX, page 136a.)

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[2] THE COURT: All right. Say again. I lost you there. The claim construction was - - as I understand where we are in terms of law of the case, is that the claims construction is - - was either affirmed or was not the subject of the appeal with the single exception of the Court's conclusion that there was a lack of structure with respect to the vacuum sensor and that - - and that aspect of the Court's construction order was the subject of reversal.

The District Court and CAFC both failed to heed the admonition given to parties in patent suits in the case handed down by this Court in White v. Dunbar, 119 U.S. 47, 51 (1886):

> **"Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express."** (Emphasis added).

The District Court and the CAFC failed to apply the law of the case doctrine in their 2003 and 2004 decisions, respectively, and treated claim 1 of the '348 patent as a "nose of wax" to require that it include a specific location of the pair of fuel injectors. Nowhere is such limitation expressed or shown in the specification of the'348 patent. In essence, the District Court and the CAFC have rewritten claim 1 of the '348 patent by incorporating inconsequential differences found in the HD accused devices as limitations into the claim. For the courts themselves to engage in this sleight of hand is unconscionable and should not be allowed to stand. Therefore, for Mr. Budde to receive "due process", the CAFC's new, decision of October 5, 2004 should be reversed and the case remanded to the District Court for a trial on the merits based on the 2001 CAFC claim construction decision.

That's where we are. So I don't know that anything needs to be modified any further. (Emphasis added.)

II. THE OCTOBER 5, 2004 FEDERAL CIRCUIT DECISION VIOLATES BUDDE'S RIGHT TO DUE PROCESS

For the CAFC in its October 5, 2004 decision to now compound the error of the District Court in its Ruling on the summary judgment motions in July 2003 not only violates the "law of the case" doctrine, but represents a denial of due process to Mr. Budde by the CAFC. The pair of fuel injectors was no longer an issue regarding claim interpretation as of the CAFC's May 24, 2001 decision. (APPENDIX, page 22a.) For the CAFC to say in October 2004 that:

> "On remand, the District Court **clarified** its claim construction, stating that this limitation required the fuel injectors be mounted in the throttle body. Budde III, slip op. at 12-13". (APPENDIX, page 7a.) (Emphasis added)

totally overlooks the reality of what occurred. The District Court did not clarify its claim construction in its 2003 Ruling but rather, clearly and unabashedly, violated this Court's "nose of wax" admonition by changing and reversing its earlier 1999 claim construction on this element. In doing so, the District Court not only ignored the 2001 mandate of the CAFC that the pair of fuel injectors was not in dispute, but chose to ignore its own 1999 Ruling, as affirmed by the 2001 CAFC appellate decision, which established the law of the case with respect to the fuel injectors. The CAFC compounded the District Court's 2003 Ruling error by supporting this "nose of wax" reconstruction of the claim in its October 2004 appellate decision. Not only did the CAFC violate the clear "law of the case" doctrine which it set in its own earlier 2001 decision in this case, but in doing so denied Budde due process.

Budde should have been provided an opportunity to submit evidence on the question of literal infringement and, especially, infringement under the doctrine of equivalents in view of the District Court's "clarification," and the failure to have afforded him that opportunity is a violation of Budde's due process rights. See Bemis Mfg. v. Dornoch Medical Systems, Inc., 21 Fed. Appx. 930 (Fed. Cir. 2001). Even if the law were to allow the law of the case doctrine to be ignored, at a minimum, Budde should be allowed to argue the changed claim construction based on further evidence and expert testimony, which he has never had the opportunity to do before the District Court or CAFC.

Plaintiff has unquestionably been denied due process. This Court should reverse the October 5, 2004 CAFC decision and remand this case for a trial on the merits, if Mr. Budde is to receive any justice in this matter, much less his day in court, which he has yet to receive after over seven and one half years since this case was filed.

III. THE OCTOBER 5, 2004 FEDERAL CIRCUIT DECISION IGNORES THE DISTRICT COURT'S EQUIVALENTS FINDING

The CAFC's October 5, 2004 decision states:

> "The district court, in the face of 'conflicting expert opinions' presented by

> Budde and Harley-Davidson, found a 'triable issue of material fact' concerning whether the difference in the location of the fuel injectors was insubstantial, and thus equivalent, under the doctrine of equivalents. Id. The district court found that the possible conclusion that the placement of the fuel injectors in the Harley-Davidson systems was equivalent to the claimed placement would not vitiate the limitation in question because 'the fuel injectors clearly are present in HD's [Harley-Davidson's] EFI system.'" (APPENDIX, page 9a.)

Expanding one element into two, or combining two elements into one, does not preclude application of the doctrine of equivalents. The solidity of this precedent was referred to by Judge Learned Hand in Royal Typewriter Co. v. Remington Rand, Inc., 168 F.2d 691, 693, 77 U.S.P.Q. (BNA) 517, 519 (2d Cir.), cert. denied, 335 U.S. 825, 93 L. Ed. 379, 69 S. Ct. 50 (1948):

> "Although we are chary [sic] of all objective absolutes in the field of patents, reliance upon which has done more to conceal and confuse the subject than anything else, courts have with curious unanimity held that it does not avoid infringement to combine into one member that which the patent discloses as two, if the single member performs the duties of both in the same way. The decisions are so numerous that we confine ourselves to

> citing those which over the last thirty years we have passed ourselves." [Citations omitted].

The simple fact is that in the Budde '348 patent and in both the Old and New HD EFI systems there is an induction module. The induction module in the '348 patent consists of a pair of fuel injectors, throttle body and intake manifold. The Original HD EFI system also consists of an induction module made up of a throttle body and intake manifold with the fuel injectors mounted therein. Also, the New HD EFI system consists of an induction module made up of a two-piece unit having a throttle body and an intake manifold bolted to the throttle body with fuel injectors mounted therein. The "fuel injector and throttle body" is part of a unitary assembly known as the induction module, which in the '348 patent and the Original and New HD EFI systems also includes the intake manifold, as stated in the '348 patent at col. 4, lines 6 – 18:

> "Fuel injectors 11 are mounted in a fuel injector throttle body 13 for delivering fuel from the injectors to the engine cylinders through the intake manifold 15. Since V-twin engines only have two cylinders, only two separate injectors are required. These fuel injectors are standard units and for the present invention can be the particular injectors made by Bosch which are utilized in Volkswagen flat four opposed cylinder air cooled engines. The throttle body 13 is secured to the intake manifold 15 which in turn is secured to the cylinder heads

proximate the intake valves of the engine."

There is no requirement in the '348 patent as to the exact location of the pair of fuel injectors as found in the 1999 District Court Ruling on claim construction and upheld on appeal in the 2001 decision on claim construction by the CAFC.

See, also, e.g., Apex Electrical Mfg. Co. v. Maytag Co., 122 F.2d 182,187, 50 U.S.P.Q. (BNA) 90, 94 (7th Cir.), cert. denied, 314 U.S. 687, 86 L. Ed. 549, 62 S. Ct. 297 (1941) ("Patents are not limited to the structure described and shown, but the invention may be embodied in various forms. ... Infringement is not avoided by combining two elements in a claim into one part"); Specialty Equipment & Mach. Corp. v. Zell Motor Car Co., 193 F.2d 515, 518, 92 U.S.P.Q. (BNA) 84, 87 (4th Cir. 1952) ("[O]ne using the substance and essentials of a patented combination does not avoid infringement by varying nonessential details. Neither the joinder of different elements of a patented combination into two or more doing together substantially what was done by the single element will evade a charge of infringement"); No-Joint Concrete Pipe Co. v. Hanson, 344 F.2d 13, 15, 144 U.S.P.Q. (BNA) 519, 520 (9th Cir.), cert. denied, 382 U.S. 843, 15 L.Ed. 2d 83, 86 S. Ct. 79 (1965) ("A substantial body of law recognizes that infringement is not avoided by making into one part that which has been shown as two"); Magrath v. Draper Corp., 384 F.2d 672, 674, 155 U.S.P.Q. (BNA) 609, 610 (1st Cir. 1967) ("If unification or combination be regarded as omitting something, it is not enough to omit an element when the omission 'is attended by a corresponding omission of the function performed by that element ... if the elements retained performed the same function as before'") (quoting Richards v. Chase Elevator, 159 U.S. 477, 486, 40 L. Ed. 225, 16 S. Ct. 53 (1895)).

Essentially, the CAFC's analysis of "fuel injector and throttle body" (APPENDIX, pages 9a and 10a) of its October 5, 2004 decision eliminates the language "fuel injector and," so that the fuel injectors are mounted in a "throttle body", thereby improperly rewriting the claim. This impermissible rewriting ignores the facts establishing equivalents under settled precedent that neither the joinder of different elements of a patented combination into one, nor separation of one integral part into two or more, doing together substantially what was done by the single element, will evade a charge of infringement.

Budde's expert testified that there was absolutely no difference between locating the fuel injectors at one end of the induction module or the other. Why has the CAFC overturned the District Court's finding that under the doctrine of equivalents there is a triable issue of fact on the pair of fuel injectors? In fact, the District Court's initial 1999 claim construction with respect to the pair of fuel injectors is the correct one, i.e., there is nothing in the '348 patent requiring any particular kind of fuel injection system, the prosecution history does not require location of the fuel injectors in a particular location, and there is no such limitation in the claim to restrict the range of equivalents. See page 8 above. At a minimum, Budde is entitled to have this issue on equivalents heard before a jury, where all the evidence and experts can be heard. That is what the law requires, where there is a dispute on a material issue of fact under the doctrine of equivalents, as was found by the District Court when considering the parties' Cross-Motions.

This case has been pending since 1997 and Mr. Budde has not yet had the benefit of having his day in Court, but rather, has been buffeted back and forth between the District Court and the CAFC for seven years on a claim construction that was clearly settled by the District Court in its 1999 claim construction Ruling and affirmed by the CAFC's 2001 complete and final decision on claim construction.

At a minimum, this Court should reverse the erroneous CAFC decision of October 5, 2004 and remand this case for a full trial on the merits of infringement, validity, and damages, based on the original and full claim construction contained in the CAFC decision of 2001. Mr. Budde is entitled to nothing less, if he is to receive due process, which the Constitution guarantees. If the District Court and CAFC had not been so anxious to summarily dispose of this case, Mr. Budde could have had a full trial (requiring no more than a week) several years ago.

CONCLUSION

The issue raised here is one of fundamental rights of the parties to have the claim construction fixed, not treated by the courts themselves as a "nose of wax", and not be subjected to a "rolling" Markman claim construction, particularly when it has already been appealed once and a final claim construction decision has been handed down by the CAFC as occurred in this case back in 2001. It is fundamentally unfair and contrary to any notion of justice to be required to face years of expensive litigation around a moving target as to the simple construction of a single element of a single claim in suit, without ever having the opportunity to have a full and open trial on all the evidence with all the witnesses. Surely, this is neither what our system of justice nor the Markman decision contemplated for litigants in a patent suit. This is not justice dispensed, or even long delayed, but simply justice and due process completely denied!

In light of the foregoing, it is respectfully requested that the United States Supreme Court give William Budde his day in court by issuing a writ of certiorari to the Court of Appeals for the Federal Circuit and consider Petitioner's argument that his right to due process has been denied by the courts' below.

Respectfully submitted,

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03-1610, -1641

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

WILLIAM A. BUDDE,
Plaintiff-Appellant,

v.

HARLEY-DAVIDSON, INC. and
HARLEY-DAVIDSON MOTOR COMPANY,
Defendants-Cross Appellants.

October 5, 2004, Decided

NOTICE: THIS DECISION WAS ISSUED AS UNPUBLISHED OR NONPRECEDENTIAL AND MAY NOT BE CITED AS PRECEDENT. PLEASE REFER TO THE RULES OF THE FEDERAL CIRCUIT COURT OF APPEALS FOR RULES GOVERNING CITATION TO UNPUBLISHED OR NONPRECEDENTIAL OPINIONS OR ORDERS.

COUNSEL: J. Donald Best, Michael Best, Madison, WI, Russell L. Johnson, Skjerven, Morrill, San Jose, CA, and John C. Scheller, Michael Best, Madison, WI, for Defendants-Cross Appellants HARLEY-DAVIDSON MOTOR COMPANY and HARLEY-DAVIDSON, INC.

Jack Russo and William C. Milks, III, Russo & Hale, Palo Alto, CA, for Plaintiff-Appellant WILLIAM A. BUDDE.

JUDGES: Before RADER, BRYSON, and LINN, Circuit Judges.

OPINION BY: LINN

OPINION: LINN, Circuit Judge.

William A. Budde ("Budde") appeals from a final decision of the U.S. District Court for the Northern District of California granting a motion for summary judgment of non-infringement of U.S. Patent No. 4,955,348 ("the '348 patent") filed by Harley-Davidson, Inc. and Harley-Davidson Motor Co. (collectively "Harley-Davidson"). Budde v. Harley-Davidson, Inc., 2003 U.S. Dist. LEXIS 25990, No. C-98-20447-JF (N.D. Cal. July 29, 2003) ("Budde III"). Harley-Davidson cross-appeals the denial of its argument in support of summary judgment that the "fuel injector and throttle body" limitation was not met under the doctrine of equivalents. Reversal of the district court's ruling on that issue, however, would not alter the judgment in Harley-Davidson's favor, so that issue is not properly presented as a cross-appeal. Bailey v. Dart Container Corp. of Mich., 292 F.3d 1360, 1362 (Fed. Cir. 2002). A prevailing party has no right to cross-appeal. Lindheimer v. Ill. Bell Tel. Co., 292 U.S. 151, 176, 78 L. Ed. 1182, 54 S. Ct. 658 (1934). Accordingly, we dismiss the cross-appeal and treat the challenge as the assertion of an alternative ground for affirming the summary judgment of non-infringement.

We affirm the district court's judgment that Harley-Davidson did not infringe the '348 patent, literally or under the doctrine of equivalents, for the reasons set forth below.

I. BACKGROUND

The '348 patent issued in 1990 and is directed to an electronic fuel injection ("EFI") system for V-twin motorcycle engines. Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1371 (Fed. Cir. 2001) ("Budde II"). Claim 1 of the '348 patent is representative, with the disputed terms highlighted:

1. A fuel injection conversion system for V-twin motorcycle engines having two cylinders, an ignition system, and a fuel source, comprising an intake manifold providing separate ducts for delivering a fuel and air mixture separately to each cylinder,

a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold,

a fuel distributor for delivering an individual pressurized fuel flow to each of said injectors,

a fuel pump for delivering a pressurized fuel flow from the fuel source to the fuel distributor,

a fuel flow pressure regulator for controlling the pressure of the fuel flow delivered by the distributor to said injectors,

an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto,

a throttle potentiometer for sensing the position of the throttle and producing an electronic signal in response thereto,

a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom, and

a control unit which discriminates which spark plug of the engine is firing a fuel-air mixture charged cylinder of the engine from the asymmetrical spark plug firing order related electronic signal from said electronic sensing means, said control unit electronically integrating the electronic signals from the throttle potentiometer, the electronic sensing means, and the status sensing means to generate electronic signals which control the fuel injectors and operate them at the proper time and for the calculated duration to deliver the proper amount of fuel to said cylinders for the engine operating conditions by timed injection.

'348 patent, col. 12, ll. 26-65 (emphases added).

Budde is a co-inventor and owner of the '348 patent. In 1997, Budde sued Harley-Davidson for infringement of the '348 patent, alleging that two of Harley-Davidson's electronic fuel injection systems-the "old" and "new" EFI systems-infringed its patent. Budde III, 2003 U.S. Dist. LEXIS 25990, *7; see also Budde v. Harley-Davidson, Inc., No. C-98-20447-JF, slip op. at 2 (N.D. Cal. Jan. 29, 1999) ("Budde I"); Budde II, 250 F.3d at

1374. The district court held a Markman hearing, then construed seven of the disputed claim limitations. Budde II, 250 F.3d at 1374-75. Because Budde concluded he could not establish infringement under the district court's claim constructions, the district court, at Budde's request, entered summary judgment of non-infringement. Id. at 1375.

Budde then appealed to this court, challenging the constructions of two claim limitations. Id. at 1376. We construed the two terms, vacated the summary judgment, and remanded the case for further proceedings. Id. at 1382.

On remand, Budde alleged that Harley-Davidson infringed the '348 patent, while Harley-Davidson responded that it did not infringe and that the '348 patent was invalid and unenforceable. Budde III, 2003 U.S. Dist. LEXIS 25990, *7. On cross-motions for summary judgment, the district court granted Harley-Davidson's motion for summary judgment that Harley-Davidson did not infringe the '348 patent, either literally or under the doctrine of equivalents. 2003 U.S. Dist. LEXIS 25990, *9. In that judgment, the district court concluded that several limitations of claim 1 were not met by Harley-Davidson's systems, literally or under the doctrine of equivalents, but found that a "triable issue of material fact" remained as to whether Harley-Davidson's systems met the "pair of fuel injectors" limitation of claim 1 under the doctrine of equivalents. 2003 U.S. Dist. LEXIS 25990, *11.

Budde again appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

A. Standard of Review

"We review a district court's grant of summary judgment de novo." ACTV, Inc. v. Walt Disney Co., 346 F.3d 1082, 1087 (Fed. Cir. 2003). When evaluating a motion for summary judgment, we view the record evidence through the same evidentiary standard that would prevail at trial. Eli Lilly & Co. v. Barr Labs., Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). Summary judgment is only appropriate if there are no genuine issues of material fact and the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1116 (Fed. Cir. 1985) (en banc). On summary judgment,

> claim construction is a matter of law that we review de novo. Comparison of the claims to the accused device requires a factual determination that every claim limitation or its equivalent is found in the accused device. Because infringement is a question of fact, infringement is properly decided at summary judgment only when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device.

Int'l Rectifier Corp. v. IXYS Corp., 361 F.3d 1363, 1369 (Fed. Cir. 2004) (internal citations and quotation marks omitted).

B. Analysis

Budde argues that the district court erred in granting summary judgment that Harley-Davidson did not meet the "conversion system," "intake manifold," "pair of fuel injectors," "electronic sensing means," "status sensing means," and "control unit" limitations in claim 1 of the '348 patent. To prevail on appeal, Budde must show error as to each claim limitation. Because we conclude that the district court correctly concluded that neither of Harley-Davidson's systems contained the "pair of fuel injectors" limitation of claim 1 of the '348 patent, and because we hold as a matter of law that no reasonable jury could find infringement under the doctrine of equivalents of any Harley-Davidson system without reading the "pair of fuel injectors" limitation out of the claim, we affirm. We need not consider the arguments pertaining to the remaining disputed claim limitations.

Budde argues that the district court erred in construing the "pair of fuel injectors mounted in a fuel injector and throttle body" limitation in claim 1 of the '348 patent. This claim limitation states in pertinent part: "a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold." '348 patent, col. 12, ll. 33-34. The district court initially construed this term to require "that two fuel injectors be mounted in a fuel injector and throttle body." Budde I, slip op. at 8. The parties did not appeal the construction of this claim term, and this court did not decide issues related to this claim construction in the prior Budde II appeal. On remand, the district court clarified its claim construction, stating that this limitation required that the fuel injectors be mounted in the throttle body. Budde III, 2003 U.S. Dist. LEXIS 25990, *24.

We discern no error in the district court's claim construction. The express language of the claim distinguishes between a "fuel injector and throttle body" and an "intake manifold" and recites that the fuel injectors are mounted to the "fuel injector and throttle body," which is secured to the "intake manifold." See '348 patent, col. 12, ll. 33-34. Under the ordinary and customary meaning of the words of the claim, the pair of fuel injectors must be mounted in the "fuel injector and throttle body" and not the "intake manifold." Thus, the district court was correct in concluding that mounting the pair of fuel injectors in the intake manifold does not literally infringe the claim.

The district court found undisputed evidence that in Harley-Davidson's "old" EFI system, the parts corresponding to the throttle body and intake manifold claim limitations were combined into an integral "induction module." Budde III, 2003 U.S. Dist. LEXIS 25990, *26. Because the pair of fuel injectors are mounted in the intake manifold portion of the induction module rather than the throttle body portion, the "old" EFI system did not literally meet the claim limitation. Id. Concerning Harley-Davidson's "new" EFI system, the district court found it was undisputed that the throttle body and intake manifold are separate parts bolted together and that the fuel injectors are mounted in the intake manifold. Id. We agree and, thus, concur in the district court's conclusion that no reasonable juror could find that either of Harley-Davidson's "old" or "new" EFI systems literally met the "pair of fuel injectors" limitation of claim 1 of the '348 patent. Claim 1 is therefore not literally infringed by these systems.

Harley-Davidson challenges the district court's denial of Harley-Davidson's motion for summary judgment that its systems did not meet the "pair of fuel injectors" limitation under the doctrine of equivalents. The district court, in the face of "conflicting expert opinions" presented by Budde and Harley-Davidson, found a "triable issue of material fact" concerning whether the difference in the location of the fuel injectors was insubstantial, and thus equivalent, under the doctrine of equivalents. Id. The district court found that the possible conclusion that the placement of the fuel injectors in the Harley-Davidson systems was equivalent to the claimed placement would not vitiate the limitation in question because "the fuel injectors clearly are present in HD's [Harley-Davidson's] EFI system." Id.

The district court correctly notes that Warner-Jenkinson cautioned that "it is important to ensure that the application of the doctrine [of equivalents], even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997); see also Dolly, Inc. v. Spalding & Evenflo Cos., 16 F.3d 394, 398 (Fed. Cir. 1994) ("The doctrine of equivalents is not a license to ignore claim limitations."). As previously discussed, the claim limitation in question explicitly distinguishes between the "fuel injector and throttle body" and the "intake manifold" and recites that the fuel injectors are "mounted in [the] fuel injector and throttle body." '348 patent, col. 12, ll. 33-34 (claim 1) (emphasis added). To conclude that the placement of the fuel injectors on the intake manifold (or on the intake manifold side of the induction module) is equivalent to the claimed mounting of the injectors in the "fuel injector and throttle body" ignores the principal relationship between the three components recited in the limitation-the "fuel injectors," the "fuel injector and throttle body," and the "intake manifold"-and makes the relational claim language superfluous. Thus, a finding of equivalence under the doctrine of equivalents would read "mounted in a fuel injector and throttle body" out of the claim and vitiate the claim limitation. In light of this legal error, and given the undisputed evidence concerning the combination of Harley-Davidson's accused systems, we hold no reasonable juror could find that Harley-Davidson's "new" and "old" EFI systems infringe claim 1 of the '348 patent literally or under the doctrine of equivalents.

III. CONCLUSION

For the foregoing reasons, and on the alternative ground asserted by Harley-Davidson as to the "pair of fuel injectors" limitation of claim 1, we affirm the district court's judgment that the Harley-Davidson systems at issue did not infringe the '348 patent, either literally or under the doctrine of equivalents.

IV. COSTS

No costs.

99-1533, 99-1534

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

WILLIAM A. BUDDE,
Plaintiff-Appellant,

v.

HARLEY-DAVIDSON, INC. and
HARLEY-DAVIDSON MOTOR COMPANY,
Defendants-Cross Appellants.

May 24, 2001, Decided

COUNSEL: Robert M. Skolnik, of West Long Branch, New Jersey, argued for plaintiff-appellant.

Michael E. Husmann, Michael Best & Friedrich LLP, of Milwaukee, Wisconsin, argued for defendants-cross appellants. With him on the brief was J. Donald Best.

JUDGES: Before BRYSON, LINN, and DYK, Circuit Judges.

OPINION BY: LINN

OPINION: LINN, Circuit Judge.

William A. Budde appeals the district court's judgment of non-infringement. Budde v. Harley-Davidson, Inc., C-98-20447-JF (EAI) (N.D. Cal. June 30, 1999). This judgment was entered at Budde's request, following the district court's claim construction order, which

Budde now challenges. Budde v. Harley-Davidson, Inc., C-98-20447-JF (EAI) (N.D. Cal. Jan. 29, 1999) ("Order Construing Claims"). We hold that the district court erred in concluding that the claim limitation "electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug" requires sensing the electronic pulse that fires the spark plugs and that the specification contained no structure corresponding to the function of the "electronic sensing means." We also address the conditional cross-appeal of Harley-Davidson, Inc. and Harley-Davidson Motor Co. (collectively "Harley-Davidson"), and hold that the district court did not err in its construction of the claim limitation "status sensing means." We vacate the judgment of non-infringement and remand the case for further proceedings consistent with this opinion.

BACKGROUND

I.

A. Overview

U.S. Patent No. 4,955,348 (the " '348 patent") covers fuel injection conversion systems for reciprocating engines generally and V-twin motorcycle engines in particular. The invention is described as being particularly well-suited for use with V-twin engines customarily used on Harley-Davidson motorcycles. '348 patent, col. 1, ll. 7-11.

Such engines have an ignition system, a fuel delivery system, and two cylinders. Each cylinder includes a cylinder head, a piston, and a spark plug. The '348 patent discloses that Harley-Davidson motorcycle engines typically use one of three types of ignition systems: (1) a breaker ignition system; (2) an electronic ignition system; or (3) a magneto ignition system. Id. at col. 4, ll. 66-67. In each type of ignition system, a device or sensor is used to sense crankshaft or camshaft position. This sensor generates a series of low voltage timing pulses at shaft positions corresponding to the top of the power stroke position of each of the two cylinders. These low voltage pulses feed an ignition coil that, in turn, supplies high voltage pulses to the spark plugs. The patented system is compatible with all of these ignition systems to provide a fuel injection conversion system that will retrofit any Harley-Davidson V-twin motorcycle engine. Id. at col. 2, ll. 49-52.

Fuel injection has long been recognized as an efficient way to provide a fuel-air mixture to reciprocating engines. Fuel injection has also been known to be difficult to implement, because it requires a sophisticated sensing system to properly time the delivery of a fuel charge to each successive cylinder in the firing sequence. Budde asserts that at the time he and his co-inventor, Floyd Knapp, filed the patent application that issued as the '348 patent, there were substantial compatibility problems in fitting a fuel injection system - either in the initial manufacturing process or in an after-market modification - onto an engine that was originally designed for carburetion. A critical compatibility problem was deriving timing information. Id. at col. 3, ll. 33-36.

Timing information is crucial to proper operation of a fuel injection system, because it assures that the injection system feeds fuel only to the cylinder that is to be fired. Most fuel injection systems acquire timing information from the engine's spark distributor. However, in a carbureted Harley-Davidson V-twin engine, the firing system does not use a spark distributor. In a Harley-Davidson engine, when one cylinder is on the power stroke, the other is on the exhaust stroke, and both spark plugs may be fired simultaneously with no adverse consequences. This eliminates the need for a distributor or any like electromechanical device for "steering" spark pulses. Id. at col. 3, ll. 33-39. Thus, to convert a simultaneously firing V-twin engine to fuel injection requires adding some device or arrangement to ascertain which of the two cylinders needs a fuel charge from the injectors at any particular time in the cycle.

To add a distributor, a cam and switch, or any other type of electromechanical device for the purpose of generating the needed timing information for a fuel injection conversion system requires making undesirable and impractical mechanical modifications to the engine. Id. at col. 3, ll. 44-50. The invention described in the '348 patent overcomes this problem by deriving the needed timing information electronically rather than by adding an electromechanical device.

The invention is based on the recognition that while both spark plugs in a Harley-Davidson V-twin engine fire simultaneously, the time between successive spark plug firings is not identical. Instead, the time separation alternates between 4/9 and 5/9 in each complete timing cycle to accommodate the asymmetrical relationship between the cylinders in the V-twin arrangement. By detecting the low voltage timing pulses produced in the engine's existing ignition system, and by measuring the time between successive low voltage timing pulses, the system of the '348 patent determines electronically (i.e., using a control unit) when each respective cylinder is ready for a fuel charge without having to add a distributor, a cam and switch, or any other sort of electromechanical device to the engine. Id. at col. 2, ll. 21-34. This not only eliminates having to make mechanical alterations to the engine, but also enables the patented conversion system to be installed on any simultaneously firing V-twin engine regardless of which of the three different types of ignition systems the engine uses.

As stated above, in each type of ignition system addressed by the present invention, a device or sensor is used to sense camshaft position and emits a low voltage spark plug firing pulse (timing pulse) in response thereto. The invention described in the '348 patent feeds the low voltage timing pulses generated by the ignition system's existing device or sensor to a control unit. The control unit then measures the time between successive low voltage timing pulses. Since the time between the firing of cylinder 1 and then cylinder 2 is different from the time between the firing of cylinder 2 and then cylinder 1, the control unit is able to determine from the stream of low voltage timing pulses which cylinder needs to be charged with fuel. The output of the control unit thus provides the needed timing signals for the fuel injectors without any mechanical modification of the engine. Cf. '348 patent, col. 3, ll. 44-47.

B. Detailed Discussion

The '348 patent describes the breaker, electronic, and magneto ignition systems in detail in lines 5 through 56 of column 5. The patent describes how, in each of these ignition systems, low voltage timing pulses are provided by various sensing devices. For breaker and electronic ignition systems, the sensing devices include mechanical points, solid-state devices, or Hall effect devices. Mechanical points are typically driven by a camshaft, which in turn is driven by the engine's crankshaft. As the camshaft rotates, it forces the points apart. When the points are separated, the ignition coil temporarily loses its ground (i.e., the points temporarily "break" the low voltage current being fed to the ignition coil) and generates a high voltage pulse that fires the spark plugs. Thus, spark plug firing is caused by, and therefore can be determined by, the low voltage interrupt generated by the points as the camshaft rotates. This low voltage interrupt is input to the control unit of the present invention.

A Hall effect device tracks camshaft position using a metallic timing cup having a pair of windows cut into the cup's sides. See '348 patent, at col. 5, ll. 37-39. The metallic timing cup is typically attached to a camshaft, id., which is driven by the engine's crankshaft assembly. The position of the windows on the metallic timing cup corresponds to the position of the pistons within the two cylinders, respectively. See id. at col. 5, ll. 39-41. That is, each window corresponds to a plug firing and causes a magnetic field that creates a low voltage pulse that is sent to the ignition coil, id., to cause the ignition coil to send a high voltage pulse to fire the spark plugs. Thus, spark plug firing is caused by, and therefore can be determined by, a Hall effect device's tracking of windows on a metallic timing cup. The low voltage pulse created by the Hall effect device is input to the control unit of the present invention. Id. at col. 5, ll. 43-45.

Magneto ignition systems are described as using a rotating magnet to generate a constantly changing flux in the core winding of a magneto coil. In the same manner as in the breaker or electronic systems, interruption of the control coil current in the magneto system causes high voltage signals to be generated to fire the spark plugs. Thus, spark plug firing is caused by, and therefore can be determined by, the low voltage interrupt caused by the changing flux. This low voltage interrupt is input to the control unit of the present invention.

The patented system describes the output of the electronic ignition system sensor (e.g., mechanical points, solid-state devices, Hall effect devices) as directly feeding the control unit. Id. at col. 5, ll. 43-45. If the ignition system uses mechanical points or a Hall effect device, the output of these sensors is described as being used to feed the control unit. Id. at col 5, ll. 45-48. Similarly, the interruption of the control coil current in the magneto system is described as being used to feed the control unit. Id. at col. 5, ll. 50-51. Thus, the '348 patent describes the electronic sensors which are present in the three conventionally used V-twin motorcycle engine ignition systems and the manner in which those sensors determine when, in the engine timing cycle, the ignition system of the engine delivers a low voltage pulse to fire the spark plugs.

The written description of the '348 patent goes on to describe how the control unit analyzes the low voltage timing pulses generated by the electronic sensing devices to determine which cylinder should be charged with fuel. It does this by measuring the time span between successive pulses. The relationship of spark plug firing between cylinders is fixed for any given type of internal combustion engine based on its structural configuration. In a V-twin engine, the period between spark plug firing between the first cylinder (cylinder 1) and the second cylinder (cylinder 2) is asymmetrical due to the V-shape formed by (or the angle between) the cylinders. Id. at col. 5, l. 57-col. 6, l. 3. In a Harley-Davidson V-twin engine utilizing a Hall effect device, the windows on the camshaft's metallic timing cup reflect this asymmetry. That is, the distance, in one direction, between the window representing cylinder 1 and the window representing cylinder 2 is 4/9 of the circumference of the timing cup in a typical Harley-Davidson engine. The distance, moving in the same direction, between the window representing cylinder 2 and the window representing cylinder 1 is 5/9 of the circumference of the timing cup.

By measuring the asymmetrical firing of the spark plugs, the conversion system of the '348 patent electronically determines which cylinder should be injected with fuel. An engine timer in the control unit measures the time duration between spark plug firings, i.e., the time between electronic signals received from the electronic ignition system sensor. The control unit stores the times for comparison to determine the longer and shorter periods. By comparing the differences, the desired sequence of cylinder charging is determined by the control unit. The varying distance between the cup windows can be translated into the time lapse between the spark plug firing from cylinder 1 to cylinder 2, which is different than the time lapse between the spark plug firing from cylinder 2 to cylinder 1. For example, when the control unit detects a 4/9 spacing (or time gap) between the windows, cylinder 1 is to be injected with fuel. Conversely, when the Hall effect device detects a 5/9 spacing (or time gap) between the windows, cylinder 2 is to be injected with fuel. Id. at col. 6, ll. 4-10.

The '348 patent's fuel injection system uses a number of other sensors to detect various system parameters and supply further input signals to the control unit. See id. at col. 2, ll. 4-19. The control unit integrates (or processes) the input signals, and transmits output signals to the fuel injectors causing each fuel injector to charge its associated cylinder with fuel at the proper time. n1 See id. at col. 3, l. 65 - col. 4, l. 3.

II.

Budde filed a complaint for patent infringement against Harley-Davidson on June 11, 1997 in the Northern District of California. The district court held a Markman hearing on January 14, 1999 to construe the claims of the '348 patent, and issued its Order Construing Claims on January 29, 1999. Seven claim limitations were disputed by the parties. Because all seven of the then-disputed limitations appeared in claim 1 of the '348 patent, the district court's Order Construing Claims addressed only claim 1, which recites (with the disputed terms underlined):

1. A fuel injection conversion system for V-twin motorcycle engines having two cylinders, an ignition system, and a fuel source, comprising an intake manifold providing separate ducts for delivering a fuel and air mixture separately to each cylinder,

a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold,

a fuel distributor for delivering an individual pressurized fuel flow to each of said injectors,

a fuel pump for delivering a pressurized fuel flow from the fuel source to the fuel distributor,

a fuel flow pressure regulator for controlling the pressure of the fuel flow delivered by the distributor to said injectors,

an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto,

a throttle potentiometer for sensing the position of the throttle and producing an electronic signal in response thereto,

a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom, and a control unit which discriminates which spark plug of the engine is firing a fuel-air mixture charged cylinder of the engine from the asymmetrical spark plug firing order related electronic signal from said electronic sensing means, said control unit electronically integrating the electronic signals from the throttle potentiometer, the electronic sensing means, and the status sensing means to generate electronic signals which control the fuel injectors and operate them at the proper time and for the calculated duration to deliver the proper amount of fuel to said cylinders for the engine operating conditions by timed injection.

Id. at col. 12, ll. 26-64.

As part of its claim construction, the district court interpreted the claim limitation "electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug" and found that the '348 patent specification failed to disclose structure corresponding to the claimed function as construed by the court. Budde concluded that he could not prove infringement based on the court's claim construction and motioned the district court to enter final judgment in favor of Harley-Davidson to facilitate an early appeal. The district court granted Budde's motion and entered a judgment of non-infringement. We have jurisdiction over Budde's appeal from the district court's judgment pursuant to 28 U.S.C. § 1295(a)(1) (1994).

DISCUSSION

I. Standard of Review

A finding of non-infringement requires a two-step analytical approach. First, the claims of the patent must be construed to determine their scope. Carroll Touch, Inc. v. Electro Mech. Sys., Inc., 15 F.3d 1573, 1576, 27 U.S.P.Q.2D (BNA) 1836, 1839 (Fed. Cir. 1993). Second, a determination must be made as to whether the properly construed claims read on the accused device. Id. In this case, Budde has conceded the second part of the infringement analysis, leaving only the propriety of the district court's claim construction in issue. Claim construction is a matter of law that we review de novo. Id.

II. Analysis

The parties do not dispute the district court's construction of the following claim limitations: (1) conversion system; (2) fuel and air mixture; (3) pair of fuel injectors mounted in a fuel injector and throttle body; (4) individual pressurized fuel flow; and (5) control unit.

Budde challenges the district court's construction of the "electronic sensing means" claim limitation. In its conditional cross-appeal, Harley-Davidson challenges the district court's construction of the "status sensing means" claim limitation. Harley-Davidson asserts that the district court erred in concluding that the specification of the '348 patent discloses structure corresponding to the "status sensing means limitation."

Our analysis focuses on the construction of these two disputed claim limitations.

The parties agree that the two disputed claim limitations are written in means-plus-function form, and we agree. In construing means-plus-function claim limitations, a court must first define the particular function claimed. Thereafter, the court must identify "the corresponding structure, material, or acts described in the specification." It is not until the structure corresponding to the claimed function in a means-plus-function limitation is identified and considered that the scope of coverage of the limitation can be measured. 35 U.S.C. § 112, para. 6; Sage Prods., Inc v. Devon Indus., Inc., 126 F.3d 1420, 1428, 44 U.S.P.Q.2D (BNA) 1103, 1110 (Fed. Cir. 1997); In re Donaldson Co., 16 F.3d 1189, 1195, 29 U.S.P.Q.2D (BNA) 1845, 1850 (Fed. Cir. 1994) ("if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by the language" (emphasis added)).

Whether or not the specification adequately sets forth structure corresponding to the claimed function necessitates consideration of that disclosure from the viewpoint of one skilled in the art. See 35 U.S.C. § 112, para. 1; N. Am. Vaccine, Inc. v. Am. Cyanamid Co., 7 F.3d 1571, 1579, 28 U.S.P.Q.2D (BNA) 1333, 1339 (Fed. Cir. 1993); cf. In re Ghiron, 58 C.C.P.A. 1207, 442 F.2d 985, 991, 169 U.S.P.Q. (BNA) 723, 727 (CCPA 1971) (stating that "if such a selection would be 'well within the skill of persons skilled in the art', such functional-type block diagrams may be acceptable and, in fact, preferable if they serve in conjunction with the rest of the specification to enable a person skilled in the art to make such a selection and practice the claimed invention with only a reasonable degree of routine experimentation"). Moreover, failure to disclose adequate structure corresponding to the recited function in accordance with 35 U.S.C. § 112, paragraph 1, results in the claim being of indefinite scope, and thus invalid, under 35 U.S.C. § 112, paragraph 2. In re Dossel, 115 F.3d 942, 945, 42 U.S.P.Q.2D (BNA) 1881, 1884 (Fed. Cir. 1997).

For a court to hold that a claim containing a means-plus-function limitation lacks a disclosure of structure in the patent specification that performs the claimed function, necessarily means that the court finds the claim in question indefinite, and thus invalid. Because the claims of a patent are afforded a statutory presumption of validity, overcoming the presumption of validity requires that any facts supporting a holding of invalidity must be proved by clear and convincing evidence. Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., 204 F.3d 1360, 1367, 53 U.S.P.Q.2D (BNA) 1892, 1898 (Fed. Cir. 2000); Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1570, 1 U.S.P.Q.2D (BNA) 1593, 1595 (Fed. Cir. 1987) (stating that the presumption mandated by § 282 is applicable to all of the many bases for challenging a patent's validity). Thus, a challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function.

Electronic Sensing Means

Claim 1 of the '348 patent recites "an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto." The district court parsed the claimed function as: "(1) determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders; and (2) producing an electronic signal in response thereto." Order Construing Claims, slip op. at 9. Neither party disputes the district court's characterization of the claimed function, and we see no reason to disagree. The district court then held that the '348 patent "fails to disclose any structure corresponding to the claimed function of the electronic sensing means." Order Construing Claims, slip op. at 11.

Budde disputes the district court's analysis, asserting that the process by which the district court consulted the specification to define the structure corresponding to the claimed function was improper. Specifically, Budde asserts that the district court erred in impermissibly narrowing the term "determining" in the claimed function to require electronic "sensing." Although Budde's description of the district court's error is perhaps oversimplified, the district court in fact narrowed its own interpretation of the defined function, based on its incorrect reading of statements contained in the summary and objects of the invention. Based upon those portions of the patent disclosure, the district court erroneously stated that the structure corresponding to the claimed function could not be structure that sensed the position of the camshaft. We discuss the district court's error in more detail below.

As a quid pro quo for the convenience of employing § 112, paragraph 6, Budde has a duty to clearly link or associate structure to the claimed function. Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1360, 54 U.S.P.Q.2D (BNA) 1308, 1313 (Fed. Cir. 2000) (citing B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424, 43 U.S.P.Q.2D (BNA) 1896, 1900 (Fed. Cir. 1997)). Budde asserted to the district court that Figure 3 and the following passage of the specification defined the structure capable of performing the claimed function:

> In the present invention, sensors are utilized to obtain a timing signal from the ignition system which is inputted to the control unit of the fuel injection system for utilization in controlling the operation of the fuel injectors. The Electronic ignition systems use sensors that may be optical (usually infrared), or magnetic (usually Hall effect devices). These sensors detect the windows cut in the sides of a metallic "cup" that is attached to the end of the cam shaft. Each window corresponds to a plug firing and the angle between the windows corresponds to the angle between the cylinders. The position of the lobes of a Breaker ignition system have a corresponding relationship. The output of the Electronic ignition system sensor is used directly by the control unit of the present invention.

Col. 5, ll. 31-45.

The district court held that neither the text nor the figure cited by Budde discloses structure capable of determining when the ignition system of the engine delivers an electronic pulse to fire the spark plugs. The district court found that the text cited by Budde merely identifies two types of sensors utilized by ignition systems in Harley-Davidson carbureted engines that detect windows in a cup on the camshaft, and that "the electronic sensing means called for by the claim may not be a structure that senses the position of the camshaft." Order Construing Claims, slip op. at 10-11.

The district court based this assertion on the following statements in the summary and objects of the '348 patent:

"The present invention is designed to acquire the required timing information for providing the fuel injectors with their instructions by picking up an electronic pulse off the ignition system."

'348 patent, col. 2, ll. 21-24 (emphasis added).

"An electronic sensing means is provided for determining when the ignition system of the engine delivers an electronic pulse to fire the spark plugs of the cylinders . . . ."

'348 patent, col. 1, l. 68 - col. 2, l. 3 (emphasis added).

"It is another object of the invention to provide a fuel injection conversion system for Harley-Davidson motorcycle engines which is able to time the fuel injection sequence from analysis of the spark pulses . . . ."

'348 patent, col. 2, ll. 41-44 (emphasis added).

The district court found that these statements require the electronic sensing means to pick-up or sense high voltage pulses fed to the spark plugs from the ignition coil, rather than sensing camshaft position. Finding no structure for sensing the high voltage pulses fed to the spark plugs, the district court concluded that the '348 patent specification failed to disclose structure corresponding to the claimed function of the electronic sensing means. We note, however, that the "electronic sensing means" claim limitation merely recites the functions of "determining when" pulses are delivered to fire the spark plugs and "producing an electronic signal in response thereto," not the function of sensing the high voltage pulses sent from the ignition coil to the spark plugs. Contrary to the view of the district court, 'determining' when pulses are delivered to fire the spark plugs does not require direct detection of those pulses. Such a determination can be done indirectly, by detecting a low-voltage electronic signal from a sensor that determines, from the position of the cam shaft, when high-voltage pulses are to be delivered to the spark plugs. That interpretation of the manner in which the electronic sensing means determines when the ignition system delivers an electronic pulse to fire each spark plug is consistent with the statements in the summary and objects of the invention. These sections of the specification contrast the conventional system for obtaining timing information "from the electronic distributor," '348 patent, col. 2, ll. 25-26, with the system employed by the invention, i.e., obtaining timing information "from an analysis of the spark plug firing pulses," '348 patent, col. 2, ll. 33-34. In context, it appears that the "spark plug firing pulses" that are analyzed, and the "electronic pulse" that is "picked up . . . off the ignition system," '348 patent, col. 2, ll. 23-24, refer to the low-voltage signal from the electronic sensor, not the high-voltage pulse that is sent to fire the spark plugs.

The district court, and Harley-Davidson on appeal, rely heavily on a passage from the objects of the invention, which describes one of the objects as being to provide a fuel injection conversion system that is "able to time the fuel injection sequence from analysis of the spark pulses rather than from a mechanical electronic reading of the electro-mechanical or electronic-mechanical ignition timing unit which fires the spark plugs." '348 patent, col. 2, ll. 41-47. While the district court found that the "electro-mechanical ignition timing unit" referred to is a Hall effect device (or other device for sensing camshaft position), we think the better interpretation is that the reference to the "electronic-mechanical ignition timing unit" refers to the conventional method of acquiring timing information, which the specification identifies as "acquiring the timing information from the electronic distributor." '348 patent, col. 2, ll. 25-26. The problem solved by this invention is determining which plug is being fired (in order to determine the proper fuel injection sequence) in the absence of a distributor. Thus, one skilled in the art would understand that the patent is referring to determining the proper injection sequence using a control unit that analyzes: (1) when the ignition system delivers a low voltage pulse to cause spark plug firing; and (2) the timing between delivery of the low voltage pulses. The control unit can perform this analysis based on the low voltage pulse received from a Hall effect device (or other optical or magnetic sensor), a solid-state sensor, or a standard mechanical point setup. Use of the control unit negates the need for a distributor to determine the proper injection sequence.

In supporting the district court's opinion, Harley-Davidson's attempts to prove a lack of corresponding structure focus on the disclosure set forth in the summary and objects of the invention and, in particular, statements that the claimed function includes an "analysis of the spark plug firing pulses." Harley-Davidson invites us to conclude therefrom that the claimed function of "determining when the ignition system . . . delivers an electronic pulse to fire each spark plug" requires that the electronic sensing means analyze the firing pulses. To this end, Harley-Davidson points out that although their expert testified that a Hall effect device can determine a window within which spark plug firing occurs, he further testified that the Hall effect device could not determine the exact time of ignition coil activation. Harley-Davidson asserts that because the Hall effect device cannot determine the exact time of ignition coil activation, it does not analyze the spark plug firing pulses, and therefore it cannot perform the claimed function of determining when the ignition system delivers an electronic pulse to fire each spark plug. We are not persuaded by Harley-Davidson's argument, which fails to recognize that, as we have discussed, the summary and objects of the invention can fairly be read to refer to an electronic sensing means that determines the firing sequence of the spark plugs by detecting a low-voltage electronic signal from a sensor within the ignition system. Moreover, whatever force Harley-Davidson's argument might have viewing the summary and objects of the invention sections of the specification in isolation, it cannot be squared with the specific passage that describes in detail the electronic sensing means, see '348 patent, col. 5, ll. 31-56.

The specification must be read as a whole to determine the structure capable of performing the claimed function. See 35 U.S.C. § 112, para. 6 (1994) (requiring that a means-plus-function claim limitation "be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof" (emphasis added)); see also Serrano v. Telular Corp., 111 F.3d 1578, 1583, 42 U.S.P.Q.2D (BNA) 1538, 1542 (Fed. Cir. 1997) (holding that the proper construction of a claim limitation under § 112, paragraph 6 looks to the "disclosed structure [that] is described in a patent specification, including any alternative structures identified"). In construing terms used in patent claims, it is necessary to consider the specification as a whole, and to read all portions of the written description, if possible, in a manner that renders the patent internally consistent. In addition, it is important to construe claim language through the "viewing glass" of a person skilled in the art. Interactive Gift Express, Inc. v. Compuserve Inc., 231 F.3d 859, 866, 56 U.S.P.Q.2D (BNA) 1647, 1653 (Fed. Cir. 2000).

As discussed previously, the problem solved by the Budde invention is how to determine which cylinder needs a charge of fuel in an engine that has no distributor and fires both plugs simultaneously. This problem is preferably solved without making impractical and undesired mechanical modifications to the engine. This is achieved by deriving the needed timing information electronically, rather than mechanically, by analyzing the asymmetrical pulse train generated by the engine's existing ignition system. Analysis of the pulse train determines when each cylinder is ready for a fuel charge. As described in the '348 patent specification, the control unit of the patented system receives as an input the low voltage timing pulses picked up from the existing ignition system. These pulses trigger the simultaneous firing of the spark plugs and, by their asymmetry, impart information that the control unit uses to determine electronically, rather than mechanically, which of the two cylinders is on the power stroke and is thus ready for a fuel charge.

The summary and objects of the invention are followed by a description of the preferred embodiment, and must be read, if possible, in a manner consistent with the rest of the written description. The rest of the written description clearly states that "there are three types of motorcycle ignition systems: Breaker, Electronic, and Magneto. Any one of these types may be in use on a Harley engine, and the solution to providing a conversion system requires the adaptability to determine fuel injector timing from any one of them." '348 patent, col. 4, l. 66 - col. 5, l. 3 (emphasis added). At column 5, lines 35-51, a number of alternative sensors are disclosed that determine when the ignition system delivers a low voltage electronic pulse to fire the spark plugs. The alternative sensors include: (1) an optical sensor; (2) a magnetic sensor (e.g., a Hall effect device); (3) a standard mechanical point setup; and (4) a solid-state sensor. As we discussed in the background portion of this opinion, the detailed description discloses not only each of these sensors, but how the signals from those sensors are fed as an input to the control unit which, in turn, analyzes the low voltage timing pulses to determine electronically when each cylinder needs a fuel charge. These four sensor types are listed under the heading of "Electronic Sensing" in the description of the preferred embodiment, thus directly linking the disclosed structure to the "electronic sensing means" limitation in the claims. Each of these sensors is structure corresponding to the claimed function of the electronic sensing means. They each determine when the engine's ignition system delivers a timing pulse to fire the spark plugs and produce electrical signals in response thereto.

Harley-Davidson also relies on a portion of co-inventor Knapp's deposition testimony to show that co-inventor Knapp could not find structure in the specification of the '348 patent corresponding to the electronic sensing means. However, the portion of the testimony that Harley-Davidson cites is not sufficient to render negligible the written description of the four embodiments of the electronic sensing means discussed above.

In addition, we note that the district court's Order Construing Claims discussed neither the level of skill in the art, nor the requirement that a lack of corresponding structure be proven by clear and convincing evidence. In fact, the district court never addressed the validity of claim 1. It merely concluded, in its Order Construing Claims, that there was no structure corresponding to the claimed function of the "electronic sensing means." Despite the fact that the district court entered its judgment of non-infringement without addressing the issue of validity, its decision necessarily renders claim 1 invalid. Thus, the district court should have applied the "clear and convincing" evidentiary standard in assessing Harley-Davidson's assertion that the specification of the '348 patent fails to disclose structure corresponding to the "electronic sensing means." The district court's failure to apply the correct "clear and convincing" standard to Harley-Davidson's evidentiary submission on this issue is another reason why we hold that the district court's construction of the "electronic sensing means" limitation was erroneous. So holding requires us to consider Harley-Davidson's conditional cross appeal.

Status Sensing Means

Claim 1 of the '348 patent includes "a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom."

The district court correctly identified the claimed function as: "(1) measuring a combination of air intake and engine temperature; (2) measuring vacuum in the intake manifold; [and] (3) producing electronic signals from those measurements." Order Construing Claims, slip op. at 12. The parties do not dispute that the specification of the '348 patent discloses a thermistor as the structure capable of performing the first and third functions. However, the parties dispute whether the patent sufficiently discloses structure capable of performing the second function, i.e., measuring vacuum in the intake manifold. The district court held that the corresponding structure was identified in the written description of the patent as a "commercially available" vacuum sensor that produces an analog signal. Harley-Davidson asserts that this generic reference in the specification of the '348 patent does not adequately disclose structure for measuring vacuum in the intake manifold.

The specification states, at column 6, lines 38-40, "vacuum sensors are commercially available units which produce analog signals for the control unit." In addition, Figure 3 of the '348 patent is a block diagram of the fuel injection controller that includes a box labeled "VACUUM SENSOR."

In its claim construction analysis and corresponding determination of definiteness of the means-plus-function claims under 35 U.S.C. § 112, paragraph 2, the district court held that "the box labeled VACUUM SENSOR and the passage describing 'commercially available units' meet the definiteness requirement of § 112, P 2." Order Construing Claims, slip op. at 14. The district court explained,

Vacuum sensors were well known in the art of motorcycle engine manufacturing at the time the patent issued. The phrase "commercially available units" particularly and distinctly pointed out to those skilled in the art the vacuum sensors [that] the '348 patent claimed. Accordingly, the structure which corresponds to the [second function] is a vacuum sensor which produces an analog signal and which was commercially available at the time the patent was issued.

Id.

Harley-Davidson asserts that Budde's use of "commercially available units" unfairly allows him to incorporate by reference every commercially available vacuum sensor, which is not allowable under our holding in Atmel Corporation v. Information Storage Devices, Inc., 198 F.3d 1374, 1381, 53 U.S.P.Q.2D (BNA) 1225, 1229 (Fed. Cir. 1999). We are not persuaded by this argument because the facts of the present case are distinguishable from Atmel.

In Atmel, the means-plus-function claim limitation was "high voltage generating means disposed on said semiconductor. . . ." 198 F.3d at 1376, 53 U.S.P.Q.2D (BNA) at 1226. The specification stated, "the present invention may include high-voltage generator circuit 34. Known Circuit techniques are used to implement high-voltage circuit 34. See On-Chip High Voltage Generation in NMOS Integrated Circuits Using an Improved Voltage Multiplier Technique, IEEE Journal of Solid State Circuits, Volume SC-11, No. 3, June 1976." Id. In addition, the figures of the patent depicted the high voltage generator circuit 34 as a black box. Id. at 1377, 53 U.S.P.Q.2D (BNA) at 1226. This court held that the patentee could not incorporate the disclosure of the cited article by reference to fulfill the definiteness requirement of § 112, paragraph 2. Id. at 1382, 53 U.S.P.Q.2D (BNA) at 1230. In other words, the content of the article could not be used to discern sufficient structure in the specification that corresponded to the claimed function.

In the present case, the issue is not whether subject matter absent from the specification can be incorporated by reference to satisfy the requirement that corresponding structure be adequately described in the specification. The issue is whether the characterization, in the patent specification, of the vacuum sensor as a "commercially available unit" would be understood by one skilled in the art as structure capable of performing the function recited in the claim limitation. The record reflects, as found by the district court, that vacuum sensors were well known in the art. See In re Dossel, 115 F.3d at 946-47, 42 U.S.P.Q.2D (BNA) at 1885 ("Clearly, a unit which receives digital data, performs complex mathematical computations and outputs the results to a display must be implemented by or on a general or special purpose computer (although it is not clear why the written description does not simply state 'computer' or some equivalent phrase.)").

Harley-Davidson points to its expert's testimony at the Markman hearing that the expert "didn't see any description in the patent of the vacuum sensor other than that [the invention] has one and it's in the diagram." Relying on Atmel, Harley-Davidson argues that testimony from those skilled in the art is instructive as to whether the specification discloses structure corresponding to the claimed function. Atmel, 198 F.3d at 1379, 53 U.S.P.Q.2D (BNA) at 1228. However, Harley-Davidson's expert misses the mark in not shedding any light on the significance to, or understanding of, one skilled in the art of the described "commercially available" vacuum sensor. He also admitted that he was "not very well versed in pressure sensors." This is hardly the type of testimony that amounts to clear and convincing evidence that one skilled in the art would not understand the scope of claim 1 when read in light of the specification. In view of the foregoing, we conclude that the district court did not err in holding that the '348 patent sufficiently discloses structure capable of measuring vacuum in the intake manifold.

CONCLUSION

Because the judgment of non-infringement was entered based on an erroneous claim construction of "electronic sensing means," we vacate the judgment of non-infringement and remand for further proceedings consistent herewith.

VACATED AND REMANDED

Footnotes

n1 Budde's brief informs us that the "proper time" is when the piston of the fuel injector's associated cylinder is returning from an exhaust stroke.

Case Number C-98-20447-JF,
[Doc. Nos. 136, 137, 138, 144, 149, 166, 179, 185, 188]

UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF CALIFORNIA,
SAN JOSE DIVISION

WILLIAM A. BUDDE,
Plaintiff,

v.

HARLEY-DAVIDSON, INC., et al.,
Defendants.

July 29, 2003, Decided
July 30, 2003, Filed

COUNSEL: For WILLIAM BUDDE, Plaintiff: Jack Russo, Tim C. Hale, William Milks, Russo & Hale, Palo Alto, CA.

For HARLEY-DAVIDSON, INC., a Wisconsin corporation, defendant: Russell L. Johnson, Skjerven Morrill LLP, San Jose, CA; Michael E. Husmann, Michael Best & Friedrich, Milwaukee, WI; John C. Scheller, Michael Best & Friedrich, Madison, WI; Russell L. Johnson, Sidley Austin Brown & Wood, LLP, San Francisco, CA; J. Donald Best, Richard H. Marschall, Michael Best & Friedrich LLP, Medison, WI.

For HARLEY-DAVIDSON MOTOR COMPANY, a Wisconsin corporation, defendant: Russell L. Johnson, Skjerven Morrill LLP, San Jose, CA; Michael E.

Husmann, Michael Best & Friedrich, Milwaukee, WI; John C. Scheller, Michael Best & Friedrich, Madison, WI; Russell L. Johnson, Sidley Austin Brown & Wood, LLP, San Francisco, CA; J. Donald Best, Richard H. Marschall, Michael Best & Friedrich LLP, Medison, WI.

JUDGES: JEREMY FOGEL, United States District Judge.

OPINIONBY: JEREMY FOGEL

OPINION:

ORDER (1) GRANTING DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF NONINFRINGEMENT AND DENYING PLAINTIFF'S MOTIONS FOR SUMMARY JUDGMENT OF INFRINGEMENT; (2) DENYING THE PARTIES' CROSS-MOTIONS WITH RESPECT TO DEFENDANTS' AFFIRMATIVE DEFENSES; AND (3) ADDRESSING THE PARTIES' MOTIONS TO STRIKE EVIDENCE

On June 23, 2003, the Court heard the parties' cross-motions for summary judgment. The motions fall into two groups: those addressing the issue of infringement and those addressing the affirmative defenses of patent invalidity and unenforceability. The Court also heard several motions to strike evidence submitted by both sides. The Court will grant Defendants' motion for summary judgment of noninfringement and deny Plaintiff's motions for summary judgment of infringement. The Court will deny the parties' cross-motions for summary judgment with respect to

Defendants' affirmative defenses. With respect to the motions to strike evidence, the Court will address those motions only as they relate to evidence actually considered by the Court in analyzing the substantive motions. None of the evidence actually considered by the Court is subject to exclusion for the reasons set forth below.

I. BACKGROUND

United States Patent No. 4,955,348 ("the patent" or "the 348 patent") teaches a system for converting carbureted V-twin motorcycle engines to fuel injection. The specification focuses on Harley-Davidson ("HD") engines, but states that the conversion system will work on all V-twin motorcycle engines. A V-twin engine has two cylinders arranged at an angle to each other in a "V" configuration. The cylinders alternately are filled with a mixture of fuel and air. This fuel/air mixture then is compressed by a piston that moves up and down inside the cylinder. A spark plug is used to ignite the compressed fuel/air mixture. The resulting combustion drives the piston in an up-and-down motion that is translated into circular motion by other parts of the engine.

Prior to model year 1995, HD manufactured only carbureted V-twin motorcycle engines. In a carbureted engine, a mechanical device -- the carburetor -- mixes the correct amount of fuel and air so that the engine runs properly. In simple terms, the carburetor is a tube that narrows in one portion. Air flowing through the carburetor creates a vacuum that draws in fuel. The resulting fuel/air mixture is delivered to the cylinder.

In a fuel injected engine, an electronically controlled valve -- the fuel injector -- sprays fuel either directly into the cylinder or into the air flow at the cylinder's intake valve. According to the patent specification, fuel injection is more efficient than carburetion but can be difficult to implement because of difficulties in determining when and how much fuel should be provided for each stroke of each cylinder ("timing information"). Most fuel injection systems acquire timing information from the engine's distributor, a device that "steers" spark pulses to one cylinder or the other. At the time of the application that ultimately issued as the 348 patent, HD V-twin engines were unusual in that they did not use a distributor. Rather, the spark plugs associated with both cylinders fired simultaneously. The patent addresses the problem of acquiring timing information absent a distributor.

The specification notes that additional hardware such as a cam and switch arrangement could be added to the engine in order to provide timing information, but also notes that such additions "would probably be highly objectionable to most Harley owners. "'348 patent, col. 3, 11. 44-47. The specification further observes that the differences among motorcycle models, and the ignition systems used by different models, would make adding a cam and switch arrangement complicated and impractical. Id. at col. 3, 11. 47-50. The specification asserts that the patented conversion system "provides a solution to these problems." Id. at col. 3, 11. 58-59.

In its 2001 ruling addressing this Court's claim construction, the Federal Circuit described the patented conversion system as follows:

The invention is based on the recognition that while both spark plugs in a Harley-Davidson V-twin engine fire simultaneously, the time between successive spark plug firings is not identical. Instead, the time separation alternates between 4/9 and 5/9 in each complete timing cycle to accommodate the asymmetrical relationship between the cylinders in the V-twin arrangement. By detecting the low voltage timing pulses produced in the engine's existing ignition system, and by measuring the time between successive low voltage timing pulses, the system of the 348 patent determines electronically (i.e., using a control unit) when each respective cylinder is ready-for a fuel charge without having to add a distributor, a cam and switch, or any other sort of electromechanical device to the engine.

Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1372 (Fed. Cir. 2001). The Court went on to state as follows:

As discussed previously, the problem solved by the Budde invention is how to determine which cylinder needs a charge of fuel in an engine that has no distributor and fires both plugs simultaneously. This problem is preferably solved without making impractical and undesired mechanical modifications to the engine. This is achieved by deriving the needed timing information electronically, rather than mechanically, by analyzing the asymmetrical pulse train generated by the engine's existing ignition system. Analysis of the pulse train determines when each cylinder is ready for a fuel charge. As described in the 348 patent specification, the control unit of the patented system receives as an input the low voltage timing pulses picked up from the existing ignition system. These pulses trigger the simultaneous firing of the spark plugs and, by their asymmetry, impart information that the control unit uses to determine electronically, rather than mechanically, which of the two cylinders is on the power stroke and is thus ready for a fuel charge.

Id. at 1380.

In model year 1995, HD began manufacturing V-twin motorcycles with fuel injection. HD first came out with its "original" electronic fuel injection ("EFI") system, a sequential port injection system in which each fuel injector sprays fuel directly into the intake port of one of the cylinder heads just prior to the opening of the intake valve. In model year 2001, HD began marketing its "new" EFI system, which also is a sequential port injection system but which differs in some respects from the original system. The V-twin engines equipped with the original and new EFI systems differ in several respects from the older V-twin engines equipped with carburetors. One significant difference is that the newer fuel injected engines fire the spark plugs alternately, rather than simultaneously as in the older carbureted engines described in the patent.

Plaintiff William Budde ("Budde"), co-inventor and owner of the 348 patent, asserts that both the original and new EFI systems infringe the patent. Defendants Harley-Davidson, Inc. and Harley-Davidson Motor Company (collectively "HD") assert that there is no infringement and that in any event the 348 patent is invalid and unenforceable on a number of grounds. The parties have filed cross-motions for summary judgment on the issues of infringement, invalidity and unenforceability. The parties also have filed a number of motions to strike evidence. The Court will address the motions to strike evidence as necessary to its analysis of the motions for summary judgment.

II. INFRINGEMENT

Budde seeks summary judgment of infringement, asserting that the patent reads on both the original EFI system and the new EFI system. HD seeks summary judgment of noninfringement, asserting that its EFI systems do not meet several claim limitations.

The determination of infringement of a patent is a two-step process. Lockheed Martin Corp. v. Space Systems/Loral, Inc., 324 F.3d 1308, 1318 (Fed. Cir. 2003). The Court first construes the claims of the patent to determine their proper scope. Id. The Court then compares the properly construed claims to the accused device. Id. While claim construction is a question of law, infringement is a question of fact. Id. Accordingly, summary judgment on the issue of infringement is appropriate only if no reasonable jury could return a verdict for the nonmoving party, viewing the facts and inferences in the light most favorable to that party. Id.

With respect to the first step, this Court previously construed the disputed terms contained in claim 1. n1 The Federal Circuit reversed with respect to one term, "electronic sensing means," and left the remainder of the claim construction undisturbed. Applying the claim construction as modified by the Federal Circuit, the question is whether either party has established that no reasonable trier of fact could find for the other on the question of infringement.

To prove infringement, the patentee must show that the accused device meets each claim limitation either literally or under the doctrine of equivalents. Catalina International Marketing, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 812 (Fed. Cir. 2002). Literal infringement requires that the accused device contain each limitation of the patent claim. Id. Infringement under the doctrine of equivalents requires that the accused device contain an equivalent for each limitation not literally satisfied. Id. An element in the accused product is equivalent to a claim limitation if the differences between the two are "insubstantial" to one of ordinary skill in the art. Id., citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997). Insubstantiality may be determined by asking whether the accused device "performs substantially the same function in substantially the same way to obtain the same result" as the claim limitation. Id. at 813. This function-way-result test for insubstantiality may not be suitable in all cases. Warner-Jenkinson, 520 U.S. at 40. Whatever formulation is used, equivalence must be determined on an element-by-element basis, and not as to the invention as a whole. Id. at 29. Moreover, "it is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." Id.

Claim 1 of the patent is set forth below with the limitations at issue highlighted in bold. The Court will address each of the disputed limitations in turn.

1. A fuel injection conversion system for V-twin motorcycle engines having two cylinders, an ignition system, and a fuel source, comprising

an intake manifold providing separate ducts for delivering a fuel and air mixture separately to each cylinder,

a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold,

a fuel distributor for delivering an individual pressurized fuel flow to each of said injectors,

a fuel pump for delivering a pressurized fuel flow from the fuel source to the fuel distributor,

a fuel flow pressure regulator for controlling the pressure of the fuel flow delivered by the distributor to said injectors,

an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto,

a throttle potentiometer for sensing the position of the throttle and producing an electronic signal in response thereto,

a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom, and a control unit which discriminates which spark plug of the engine is firing a fuel-air mixture charged cylinder of the engine from the asymmetrical spark plug firing order related electronic signal from said electronic sensing means, said control unit electronically integrating the electronic signals from the throttle potentiometer, the electronic sensing means, and the status sensing means to generate electronic signals which control the fuel injectors and operate them at the proper time and for the calculated duration to deliver the proper amount of fuel to said cylinders for the engine operating conditions by timed injection.

A. Fuel Injection Conversion System

This Court has construed the term "conversion system," which appears in the preamble of claim 1, to be a limitation on the claim. The Court stated that the patented conversion system "requires a fuel injection system suitable for an engine that can be operated as a carbureted engine, regardless of whether the fuel injection system was designed as an after-market product or as original equipment." Order of January 29, 1999 ("Claim Constr. Order"), 6. This construction was articulated in the context of determining whether the term "conversion system" is a limitation at all and, if so, whether it includes original equipment. The Court quoted the specification's statement that an important object of the invention is to convert V-twin motorcycle engines from carburetion to fuel injection, but concluded that "nothing in the specification indicates, however, that the patent does not cover a fuel injection system designed by an original manufacturer to fit an engine it has previously manufactured only with a carburetor." Id. The Court's point was that a conversion system otherwise covered by the patent does not fall outside the scope of the patent simply because it is provided as original equipment rather than as an after-market conversion kit. Nothing in the Court's construction was intended to delete the requirement that the "conversion system" described by the patent actually "convert" one type of engine to another.

For the most part, Budde's arguments ignore the "conversion" aspect of the patent and focus on the Court's statement that the invention requires a fuel injection system "suitable for an engine that can be operated as a carbureted engine." While this excerpt of the Court's construction order appears quite broad standing on its own, it must be read in the context of the Court's construction as a whole and of the patent itself. As is discussed above, the Court's construction did not eliminate the "conversion" aspect of the patent. Moreover, a reading of the patent makes clear that the entire purpose of the invention is to convert to fuel injection an engine originally designed for carburetion. The abstract of the patent describes the invention as "[a] conversion kit for V-twin motorcycles to convert them from carbureted to fuel injection." The specification states the objects of the invention as follows: (1) "to provide a fuel injection conversion system for V-twin motorcycle engines which converts them from carburetion to fuel injection"; (2) "to provide a fuel injection conversion system for Harley-Davidson motorcycle engines which is able to time the fuel injection sequence from analysis of the spark pulses rather than from a mechanical electronic reading of the electro-mechanical or electronic-mechanical ignition timing unit which fires the spark plugs"; and (3) "to provide a fuel injection conversion system for Harley-Davidson motorcycles which will retrofit any V-twin motorcycle engine." 348 patent, col. 2, 11. 37-52. Read in context then, the Court's construction requires either an after-market kit that can convert a V-twin motorcycle engine with a carburetor to fuel injection or an original equipment fuel injection system that fits an engine previously manufactured only with a carburetor (thus effectively "converting" to fuel injection an engine previously designed for carburetion). n2

Budde asserts that HD uses the same basic engine in its carbureted V-twin engine motorcycles and its fuel injected V-twin motorcycles. According to Budde, this same basic engine comes in two "flavors," carbureted and fuel injected. Therefore, Budde asserts, HD's original and new EFI systems fall within the Court's construction of "conversion system."

If Budde were correct in asserting that HD simply puts its EFI systems on the same basic engine previously manufactured only with a carburetor, the Court would conclude that the conversion system limitation reads on HD's EFI systems. However, the undisputed evidence is to the contrary. HD's original and new EFI systems will not work with a V-twin engine unless such engine has specially designed parts that integrate with the EFI systems. For example, it is undisputed that HD's original EFI system utilizes a camshaft position sensor that relies upon a specially designed rotor cup. It similarly is undisputed that both the original and new EFI systems utilize a crankshaft position sensor that determines the location of the crankshaft based upon the passage of specially designed teeth on the engine flywheel. It is undisputed that HD's carbureted V-twin engines did not have these specially designed engine parts prior to model year 1999. HD introduces evidence that, as a result, HD's EFI systems would not work with the pre-1999 carbureted engines absent addition to the engines of the specially designed rotor cup (original EFI system) and specially designed teeth on the flywheel (both original and new EFI systems). Jones Decl., P 11; Farrell Decl., P 11; Lodise Decl., P 20. n3 The patent specification explicitly scorns such mechanical alterations as "highly objectionable" and emphasizes the invention's ability to convert any V-twin engine from carburetion to fuel injection absent mechanical alterations. 348 patent, col. 3, 11. 44-59.

It is undisputed that beginning in model year 1999 HD incorporated the above-described rotor cup and flywheel into its carbureted V-twin engines. An argument could be made, then, that these later carbureted engines are essentially the same as those utilizing HD's EFI systems, the only difference being the type of fuel delivery system added by HD. HD introduces evidence, however, that the engines utilizing the EFI systems have other specially designed parts such as the fuel pump, regulator and fuel lines that are necessary to withstand the high fuel pressure requirements of the EFI systems. Farrell Decl., P 19. HD introduces evidence that the EFI systems could not be used without replacement of these parts. Id. Consequently, this is not the situation posited by the Court's claim construction order, in which an original equipment manufacturer in essence "converted" to fuel injection an engine previously designed only for carburetion. To the contrary, the evidence indicates that the V-twin engines manufactured with HD's EFI systems are significantly different from the V-twin engines previously manufactured with carburetors, and that HD's EFI systems are not suitable for use with the latter engines absent significant mechanical alterations to such engines.

Budde introduces the reports of his expert, Robert White ("White"), in support of his assertion that HD uses the same basic engine in its carbureted V-twin engine motorcycles and its fuel injected V-twin engine motorcycles. White's conclusory statements to this effect are unsupported, however, and seem to hinge upon the fact that both types of engines are V-twin engines. White Report, PP 20-22; White Supp. Report, P 15. Under White's overly broad interpretation of "engine," the "conversion system" limitation would read on any fuel injection system used with a V-twin engine. Such an interpretation is not consistent with the Court's claim construction order, which focuses on whether an original manufacturer in essence has "converted" to fuel injection an engine previously made only with a carburetor. Nor is such an interpretation, which effectively would eliminate the "conversion" limitation, consistent with settled precedent. See Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 29-30, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997) (holding that each element contained in a patent claim is material to defining the scope of the invention and that it is improper to interpret a patent so broadly as to effectively eliminate any element in its entirety).

Based upon the record before it, the Court concludes that no reasonable trier of fact could find that HD's EFI systems are conversion systems within the meaning of the patent.

B. Intake Manifold Providing Separate Ducts

Claim 1 discloses "an intake manifold providing separate ducts for delivering a fuel and air mixture separately to each cylinder." The Court has construed this limitation to require "an intake manifold with two ducts, each of which separately delivers a fuel and air mixture to a cylinder." Claim Constr. Order at 7. HD concedes that this limitation reads on its original EFI system, but asserts that it does not read on its new EFI system. Budde asserts that the limitation does read on HD's new EFI system.

HD interprets the word "duct" to mean a tube running from one end of the intake manifold to the other. HD points out that Figure 6 of the patent shows two such tubes, and that HD's original EFI system similarly uses two such tubes. HD distinguishes this configuration from that of its new EFI system, in which a single tube runs from one end of the intake manifold to the other but splits into two outlets, or branches, at one end so that the fuel/air mixture can be delivered to the two cylinders. Budde interprets the word "duct" to mean not the tube running the length of the intake manifold but rather one of the two outlets or branches referenced above. Because HD's new EFI system utilizes a tube that branches into two outlets, Budde contends that the two-duct requirement is met.

The dictionary definition of "duct" is "a tube, channel, or canal through which a gas or liquid moves." Webster's New World Dictionary 419 (3d college ed. 1988). There is no indication in the specification that Budde intended a different meaning. To the contrary, the specification emphasizes the use of two separate tubes to deliver a fuel/air mixture to each cylinder without any crossover:

> The unique configuration of the intake manifold includes the fact that it has separate intake tubes or ducts for each injector whereby there is no cross-over of fuel-air mixture between the two injectors and whereby accurate timed injection can be accomplished.

'348 patent, col. 4, 11. 17-22. Because the specification makes clear that a duct is a tube, the two-duct requirement cannot be met by a single duct or tube that contains two outlets or branches at one end. Moreover, the latter configuration could not deliver the fuel/air mixture without any crossover, which feature of the two-duct configuration is touted by the specification. This analysis is consistent with the Court's construction of the limitation, which requires that each duct referenced in claim 1 "separately" deliver a fuel/air mixture to one of the cylinders.

Budde's expert, White, refers to the two outlets at the end of the single tube in HD's new EFI system as "ducts," but offers no facts in support of this reference, no explanation for the patent language discussed above and no evidence that one of ordinary skill in the art would define "ducts" in this manner. White Report, P 29; White Supp. Report, PP 19, 21.

The Court concludes that no reasonable trier of fact could find that the single-duct configuration of HD's new EFI system literally meets the two-duct limitation set forth in claim 1. The Court further concludes that no reasonable trier of fact could find that the single-duct configuration of HD's new EFI system meets the claim limitation under the doctrine of equivalents. The specification emphasizes the differences between the patented configuration and other fuel injection systems that have fuel/air crossover. 348 patent, col. 4, 11. 17-30 The specification further explains that, with a two-duct configuration, a small air communication passage between the two ducts is provided "to equalize the pressure in the tubes for balance between the cylinders and during engine operation without cross-over of the fuel-air mixture." Id. at col. 4, 11. 36-41. Given the specification's characterization of the two-duct configuration as "unique," and the details provided regarding the differences between this configuration and those in which there is fuel/air crossover, no reasonable trier of fact could conclude that the differences between the patented two-duct configuration and HD's single-duct configuration are insubstantial.

C. Pair Of Fuel Injectors Mounted In A Fuel Injector And Throttle Body

Claim 1 discloses "a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold." The Court has construed this limitation to require that the two fuel injectors be mounted in a body referred to as a "fuel injector and throttle body" and that "the fuel injector and throttle body be secured to the intake manifold." Claim Constr. Order at 8. The parties disagree as to what type of body qualifies as a "fuel injector and throttle body." HD asserts that this body is the combination of the fuel injectors and the throttle body; that is, that the limitation is simply an awkwardly worded requirement that the fuel injectors be mounted in the throttle body. Budde asserts that the fuel injectors need not be mounted in the throttle body, and that a "fuel injector and throttle body" is made up of the fuel injector component -- meaning the fuel injectors and whatever part they are mounted upon -- and the throttle body component.

The limitation is ambiguous and neither of the parties' positions is entirely satisfactory. However, Budde admitted in his deposition that under the patent the fuel injectors must be mounted in the throttle body. Budde Depo., 469:8-13. He further admitted that the limitation at issue is not met if the fuel injectors are not mounted in the throttle body. Id. at 469:14-18. Given that Budde is the inventor, his testimony is highly persuasive. The specification supports Budde's testimony. Under the section labeled "Basic Elements," the specification identifies each of the invention's components and provides corresponding references to Figure 1. Both the "fuel injector throttle body" and the "throttle body" are identified as component 13 of Figure 1.

Budde does not provide any factual support for his position. Budde does argue that the Court's Claim Construction Order explicitly rejected HD's position, pointing to a portion of the Order in which the Court declined to construe the limitation as requiring throttle body injection rather than port injection. Claim Constr. Order at 7-8. However, the Court declined to construe the limitation in this manner because neither the claims nor the specification make reference to "throttle body injection" or "port injection." Id. The fact that it declined to construe the limitation in terms of a particular type of injection system did not constitute an affirmative finding for Budde on the throttle body injection versus port injection issue and does not preclude a conclusion that the limitation, as construed, requires the fuel injectors to be mounted in the throttle body.

In HD's original EFI system, the throttle body and intake manifold are combined into one integral "induction module." The fuel injectors are mounted in the intake manifold portion of the induction module rather than the throttle body portion. As a result, HD argues, the limitation does not read on the original EFI system. HD points out that if the entire induction module is viewed as the throttle body, the intake manifold portion of the induction module effectively is eliminated. However, the intake manifold is a separate required structure under claim 1, in fact, the "fuel injector and throttle body" must be "secured" to the intake manifold. Accordingly, the Court concludes that no reasonable trier of fact could find that in the original EFI system the fuel injectors are mounted in the throttle body as required under claim 1. The Court concludes likewise with respect to HD's new EFI system. In that system, the throttle body and the intake manifold are separate parts bolted to each other and the fuel injectors are mounted in the intake manifold, not the throttle body.

Budde asserts that even if the limitation is not literally met by HD's EFI systems, the limitation is met under the doctrine of equivalents. Budde presents the expert opinion of White in support of this assertion. White Report, P 36; White Supp. Report, PP 25-26. HD presents its own expert opinions to the contrary. Jones Decl., PP 27, 32; Farrell Decl., PP 42, 48; Lodise Decl., PP 33, 39. Given these conflicting expert opinions, the

Court concludes that there is a triable issue of material fact as to whether the differences in the location of the fuel injectors are "insubstantial" for purposes of the doctrine of equivalents.

HD contends that reading the limitation broadly enough to cover HD's EFI systems would vitiate the claim limitation that the fuel injectors be mounted in the throttle body. Warner-Jenkinson provides that "it is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." Warner-Jenkinson, 520 U.S. at 29. A finding of equivalence as argued by Budde would not eliminate the fuel injector element in its entirety; the fuel injectors clearly are present in HD's EFI systems. The question is whether the change in their location from the throttle body to the intake manifold is insubstantial. The Court disagrees with HD that answering this question in the affirmative would entirely eliminate a claim element in violation of Warner-Jenkinson.

HD contends that the 348 patent discloses, but does not claim, location of the fuel injectors in the intake manifold. There can be no infringement under the doctrine of equivalents if the alleged equivalent was disclosed but not claimed in the patent, even if the accused structure otherwise would be equivalent. Johnson & Johnston Associates, Inc. v. R.E. Service Co., 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc). However, the patent does not clearly disclose location of the fuel injectors in the intake manifold. HD relies upon the specification's discussion of two means for using fuel injection to provide the necessary fuel/air mixture, one being injection of the fuel directly into the cylinder and the other being injection of fuel into the air flow upstream of the cylinder. 348 patent, col. 1, 11. 24-31. This discussion does not mention the throttle body or the intake manifold and appears to be a general discussion rather than a disclosure of particular locations of the fuel injectors.

D. Electronic Sensing Means

Claim 1 discloses "an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto." This Court determined that this means-plus-function element performs two functions: "(1) determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders; and (2) producing an electronic signal in response thereto." Claim Constr. Order at 9. The Federal Circuit agreed. Budde, 250 F.3d at 1377.

"In order to establish literal infringement of a means-plus-function claim, the patentee must establish that the accused device employs structure identical or equivalent to the structure disclosed in the patent and that the accused device performs the identical function specified in the claim." WMS Gaming, Inc. v. International Game Technology, 184 F.3d 1339, 1350 (Fed. Cir. 1999). Structure in an accused device is equivalent to structure disclosed in the patent if "the differences between the structure in the accused device and any disclosed in the specification are insubstantial." Id. at 1351. A means-plus-function claim that does not literally read on an accused device nonetheless may be infringed under the doctrine of equivalents if the differences between the claim and the accused device are insubstantial. Id. at 1352. Lack of equivalent structure under a means-plus-function limitation may preclude a finding of equivalence under the doctrine of equivalents. Id. at 1353. Such will be the case unless a variant accused of infringement, but which does not literally infringe, results from technological advances developed after the patent was granted and constitutes so insubstantial a change from what is claimed in the patent that it should be held to be an infringement. Id.

HD introduces evidence that its EFI systems do not perform the function of "determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders." Jones Decl., P 34; Farrell Decl., P 55; Lodise Decl., P 41. This function is critical to the patented invention, which analyzes the asymmetrical pulse train generated by the engine's ignition system to solve the problem of "how to determine which cylinder needs a charge of fuel in an engine that has no distributor and fires both plugs simultaneously." See Budde, 250 F.3d at 1380. However, as HD points out, the engines upon which its EFI systems are used do not fire both spark plugs simultaneously and thus do not generate the 4/9 and 5/9 timing separation utilized by the patented invention and discussed at length by the Federal Circuit. See id. at 1372, 1374. HD's EFI systems simply do not rely upon -- and therefore do not seek to determine -- spark plug firing information. Jones Decl., PP 35-36; Farrell Decl., PP 56-57; Lodise Decl., PP 42-43. HD's EFI systems instead determine engine phase, i.e., which cylinder is coming up on compression and which one on the exhaust stroke.

Budde relies upon White's opinion that there is a "direct correspondence" between detecting engine phase and determining when pulses are delivered to fire the spark plugs. White Report, P 54. More specifically, White states that "determining when the engine phase is at approximately the top of the compression stroke . . . is the same as determining when the spark plug for that cylinder is fired. Id. Budde asserts that, as a result, devices in HD's EFI systems that determine phase necessarily determine when the spark plugs fire. Budde asserts that those devices in HD's systems are identical or structurally equivalent to the devices disclosed by the patent.

Even assuming that Budde is correct and that there is a correspondence between the functions of "determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders" (performed by the patented invention) and determining phase (performed by the accused devices), these functions are not identical. HD introduces evidence that, while the spark plug fires at approximately the time the piston is at the position known as top dead center ("TDC"), spark plug firing typically is measured in terms of "advance" before TDC, measured in crankshaft degrees. Farrell Decl., P 60. Spark advance can vary from ten to forty degrees before TDC during operation of the engine. Id. Accordingly, a determination of engine phase does not provide all the information necessary to determine spark plug firing. Id.

Budde does not submit evidence that contradicts the above description of phase and spark plug advance. Budde's expert, White, admitted in his deposition that spark advance information is not provided by phase information and that he has no evidence that the accused devices seek or use spark plug firing information. White Depo., 225:3 - 227:22. Based upon this record, it is clear that HD's EFI systems do not perform the function recited in the limitation. The fact that approximate spark plug firing information may be inferred from phase information does not mean that HD's EFI systems perform the function of "determining" spark plug firing information. If HD's EFI systems do not perform the function recited in the claim, it is irrelevant whether HD's EFI systems contain the same or similar structure as the invention. Accordingly, no reasonable jury could find literal infringement of the electronic sensing means. Similarly, no reasonable jury could find infringement under the doctrine of equivalents because the function performed by HD's EFI systems, determining phase information, is not substantially the same as the function recited in the patent.

E. Status Sensing Means

Claim 1 discloses "a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom." The Court has construed the function claimed by this means-plus-function limitation to be three-fold: (1) measuring a combination of air intake and engine temperature; (2) measuring vacuum in the intake manifold; and (3) producing electronic signals from those measurements. Claim Constr. Order at 12. With respect to the second function of measuring vacuum in the intake manifold, the Court has found that "the structure which corresponds to the vacuum sensing means is a vacuum sensor which produces an analog signal and which was commercially available at the time the patent issued." Id. at 14.

HD introduces evidence that its original EFI system does not perform the function of measuring vacuum in the intake manifold; does not produce an electronic signal from such measurement; and does not use a commercially available vacuum sensor or its equivalent to perform these functions. Jones Decl., P 43; Farrell Decl., P 65; Lodise Decl., P 51. Budde argues that the original EFI system's Alpha-N fuel management system "indirectly" measures vacuum in the intake manifold. The Alpha-N fuel management system uses inputs in combination with a lookup table to calculate fuel needs. Budde's contention appears to be that the recited function of measuring vacuum in the intake manifold is performed during this process because the data contained in the lookup table includes data on vacuum in the intake manifold. However, the fact that such data exists on the lookup table does not mean that HD's system "measures" vacuum in the intake manifold. Moreover, such "measurement" clearly is not performed by a commercially available vacuum sensor that produces an analog signal as required under the Court's claim construction. The Court concludes that no reasonable trier of fact could conclude that this indirect method of measuring vacuum meets the claim limitation either literally or under the doctrine of equivalents. Even assuming for purposes of analysis that the measuring function is performed by the Alpha-N fuel management system, it is performed in an entirely different way. There is no evidence that the measuring of vacuum results in an electronic signal corresponding to the vacuum measurement.

Budde argues in the alternative that the measuring function is performed by a barometric pressure sensor located on the exterior of the engine. However, there is no evidence that this barometric pressure sensor measures vacuum in the intake manifold. Budde cites to the deposition of Earnest Metz, an engineering manager of HD, for the proposition that vacuum in the intake manifold can be determined from barometric pressure. However, the cited testimony states exactly the converse -- that "if the algorithms were correct, you could get barometric pressure out of intake manifold pressure." Metz Depo., 328:21-23. While HD concedes that a barometric pressure sensor could, in fact, be used to measure vacuum in the intake manifold, there simply is no evidence that the barometric pressure sensor in HD's original EFI system actually is used for this purpose.

F. Control Unit

Claim 1 discloses "a control unit which discriminates which spark plug of the engine is firing a fuel-air mixture charged cylinder of the engine from the asymmetrical spark plug firing order related electronic signal from said electronic sensing means. . . ." This Court has construed this limitation to require that "the control unit must determine which spark plug of the engine is firing a charged cylinder at any given moment based on the different time periods between spark firings." Claim Constr. Order at 15. The reference to the "different time periods" refers to the alternating 4/9 and 5/9 time separation between the simultaneous firings of the plugs that results from the V-twin arrangement of the cylinders. See Budde, 250 F.3d at 1372, 1374. This Court further has construed the limitation to require that "the control unit must control the fuel injectors based on electronic signals derived from the signals of the throttle potentiometer, the electronic sensing means, and the status sensing means." Claim Constr. Order at 15-16.

Both the original and new EFI systems utilize a form of control unit to control the fuel injectors. HD contends that its control unit, which it refers to as an "electronic control module" or "ECM," is so different from the patented control unit that there is no infringement either literally or under the doctrine of equivalents. Budde contends that the control unit limitation does read on HD's EFI systems.

It is undisputed that the spark plugs do not fire simultaneously in the HD motorcycles at issue. Accordingly, neither of HD's EFI systems determine which spark plug is firing a charged cylinder by comparing the alternating 4/9 and 5/9 separation between the firings as is done in the patented invention. As is discussed above, the EFI systems do not contain the electronic sensing means that, in the patented invention, determines when the ignition system delivers an electronic pulse to fire each spark plug. Also as discussed above, the original EFI system does not contain the status sensing means that provides additional input to the control unit. Accordingly, no reasonable trier of fact could conclude that the control unit claimed by the patent literally is present in the accused devices. Moreover, no reasonable trier of fact could conclude that HD's ECM, which relies upon different inputs, performs substantially the same function in substantially the same way as the patented control unit.

G. Summary Judgment Of Noninfringement Is Appropriate

Based upon the foregoing analysis, the Court concludes that no reasonable trier of fact could conclude that all of the limitations set forth in claim 1, or their equivalents, are present in either of HD's EFI systems. The Court therefore will grant HD's motion for summary judgment of noninfringement with respect to both the original and new EFI systems, -- and deny Budde's corresponding motions for summary judgment of infringement.

III. INVALIDITY AND UNENFORCEABILITY

HD asserts a number of affirmative defenses based upon the alleged invalidity and unenforceability of the 348 patent: (1) invalidity under 35 U.S.C. § 102(a) on the ground that the invention was "known or used" by others; (2) invalidity under 35 U.S.C. § 102(b) on the grounds that the invention was in public use and was on sale prior to the critical date; (3) invalidity under 35 U.S.C. § 102(f) on the ground that the patent application failed to name all inventors; (4) unenforceability on the ground that Budde committed inequitable conduct before the United States Patent and Trademark Office ("PTO"); (5) invalidity under 35 U.S.C. § 103 on the ground that the invention was obvious in light of the prior art; (6) invalidity under 35 U.S.C. § 112 on the grounds that Budde failed to disclose the best mode to the PTO, that the patent is not enabled without Budde's instruction manual, that the claims are indefinite and that the written description requirement is not met. HD moves for summary judgment as to its defenses under § 102(b) and § 102(f) and as to its defense of inequitable conduct. Budde moves for summary judgment as to all the affirmative defenses.

Because a patent issued by the PTO is entitled to a statutory presumption of validity under 35 U.S.C. § 282, HD has the burden on these motions of proving its defenses by clear and convincing evidence. See Oakley, Inc. v. Sunglass Hut International, 316 F.3d 1331, 1339 (Fed. Cir. 2003). The defenses are grouped as follows for convenience of analysis.

A. § 102(b) -- Public Use Or On Sale Prior To The Critical Date (Cross-Motions)

Under 35 U.S.C. § 102(b), a person is entitled to a patent unless "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). The patent application that issued as the 348 patent was filed on November 8, 1989, making the critical date for § 102(b) analysis November 8, 1988. The parties have filed cross-motions for summary judgment with respect to § 102(b). HD asserts that the patented conversion system was in public use and on sale prior to the critical date. Budde asserts that the patented conversion system could not have been in public use or on sale prior to the critical date, because it was not completed until October 1989, shortly before the patent application was filed.

Public use under § 102(b) "does not necessarily mean open and visible in the ordinary sense; it includes any use of the claimed invention by a person other than the inventor who is under no limitation, restriction, or obligation of secrecy to the inventor." New Railhead Manufacturing, L.L.C. v. Vermeer Manufacturing, 298 F.3d 1290, 1297 (Fed. Cir. 2002). What might otherwise appear to be public use does not raise the § 102(b) bar if the inventor was testing claimed features of his or her invention. Id. However, once an inventor realizes that the invention as later claimed indeed works for its intended purpose, further "experimentation" may constitute a barring public use. Id.

The on sale bar under § 102(b) applies if, prior to the critical date, the invention is the subject of a commercial offer for sale and is ready for patenting. In re Kollar, 286 F.3d 1326, 1329 (Fed. Cir. 2002). The bar applies only if the device offered for sale embodies all of the limitations of the patent claim in question or would have rendered that claim obvious. Allen Engineering Corp. v. Bartell Industries, 299 F.3d 1336, 1352 (Fed Cir. 2002).

HD cites numerous instances in which Budde stated during his deposition that the invention was completed in 1986. For example, he stated that the invention claimed in the 348 patent was "essentially complete" in 1986; that he did not pursue a patent in 1986 because he lacked the money to do so; and that if he had had the money, he could have obtained the patent in 1986. Budde Depo., 85:20 - 87:2. He further stated that once the invention was completed in 1986, it worked for its intended purpose. Id. at 89:23 - 90:3. When questioned about a 1986 interview with Hot Bike magazine that resulted in a February 1987 article, Budde stated that the article talked about the electronic fuel timed injection as discussed in his patent. Id. at 90:14-24.

When shown a photograph that was published with the 1987 Hot Bike article, Budde identified the photograph as being the fuel injection system-covered by his patent. Id. at 153:7-10.

With respect to public use, HD refers to the 1986 interview with the reporter from Hot Bike, Budde admitted in his deposition that he let the reporter ride a motorcycle fitted with the fuel injection system. Budde Depo., 90:23-24. It is apparent from the article that Budde discussed his fuel injection conversion system at length with the reporter. With respect to on sale, HD presents evidence -- and it does not appear to be disputed -- that Budde distributed a flyer advertising his fuel injection conversion system in late 1986 and/or early 1987. Budde also placed an advertisement for custom timed injection kits in the February 1987 edition of Motorcycle Product News. At least two customers were given pricing information in March and April 1987 in response to inquiries. Id. at 195:3-21; 244:2-6.

Viewed in a vacuum, the evidence presented by HD appears to be clear and convincing proof that the invention in question was completed in 1986; that at least one person other than the inventor and not under any obligations of secrecy (the Hot Bike reporter), used the invention prior to the critical date; and that the invention was offered for sale prior to the critical date. However, Budde cites to other portions of his deposition in which he stated that the invention was not complete until after Floyd Knapp ("Knapp"), listed on the patent application as co-inventor, made his contribution. Knapp was the last of a series of engineers that Budde hired to help develop the electronic portion of the invention. Earlier engineers included Bob Lang ("Lang"), Tom Hankins ("Hankins") and Dale Hanson ("Hanson"). Knapp did not come onto the project until 1989. When asked why only he and Knapp were named as patent inventors, Budde stated as follows: "I explained to him that I went through other engineers before that, but they never really had anything complete. And Floyd was the person that made this over and refinished it and made the one that I had that we were patenting." Budde Depo., 532:11-15. Budde also testified that, although Tom Hankins developed an earlier working prototype of the invention, "it wasn't the full; because like I explained to you, Floyd's the one that basically redid the whole thing and finished it." Id. at 576:9-11. With respect to the alleged offers for sale, Budde testified that he advertised the system to see if there was market interest. Id. at 76:7-21; 113:5-22. He also testified that he did not offer the invention for sale until after he filed his patent application, stating: "I know it was after I filed for the patent. I know for sure, because I remember talking to -- I remember once it was sent in, the patent applied for and then you could offer it for sale, or you could make sales." Id. at 111:21-25. Budde testified that he did not authorize anyone to quote customers prices, and speculated that an employee might have asked him for a ballpark "target price" and passed it on to a customer. Id. at 110:10-16; 112:1-14; 242:18-243:5.

Budde also submits his own declarations in which he states unequivocally that the invention ultimately patented was not completed until Knapp made his contribution; that the fuel injection system demonstrated to the Hot Bike reporter was an earlier prototype but was not the patented system; and that he could not have offered the patented system for sale prior to the critical date because it did not exist then.

HD moves to strike Budde's declarations as "sham," asserting that they flatly contradict his deposition testimony and clearly were manufactured solely in an attempt to avoid summary judgment. "The general rule in the Ninth Circuit is that a party cannot create an issue of fact by an affidavit contradicting his prior deposition testimony." Kennedy v. Allied Mutual Insurance Co., 952 F.2d 262, 266 (9th Cir. 1991). This rule does not, however, dispose of every case in which a contradictory affidavit is introduced to explain portions of earlier deposition testimony. Id. at 266-67. Before striking an affidavit, the Court must make an affirmative finding that the affidavit is an attempt to create a "sham issue of fact" rather than the result of an honest discrepancy, a mistake or newly discovered evidence. Id. at 267.

The Court is not persuaded that Budde's declarations should be stricken as sham. While the declarations certainly contradict portions of Budde's earlier deposition testimony, the deposition testimony itself is contradictory and confusing. The Court is troubled by the discrepancies in the deposition itself, and the discrepancies between the deposition and the two declarations at issue, but is not left with a firm conviction that the declarations were prepared for the purpose of creating "sham" issues of fact. The Court notes that issues of fact exist even without reference to the declarations, as the deposition as a whole is anything but clear as to the date the patented invention was completed. Moreover, the contemporaneous deposition of Knapp, as well as Knapp's declaration, n4 indicate that Knapp did not rely upon the work of the engineers who preceded him but designed the electronics from scratch. Knapp Depo. at 56:17-25; Knapp Decl. at PP 14-16. Knapp's statements give credence to Budde's deposition and declaration statements that Knapp did far more than simply tidy up the invention, but actually came up with crucial elements of the invention in 1989.

Based upon this record, the Court concludes that there are triable issues of material fact as to whether the invention that is the subject of the 348 patent was completed in 1986 or 1989. It follows that there are triable issues of material fact as to application of the public use and on sale bars, because if the invention was not completed until 1989, as asserted by Budde, it could not have been used or offered for sale prior to the critical date.

B. § 102(f) -- Failure To Name All Inventors (Cross-Motions)

Under 35 U.S.C. § 102(f), "[a] person shall be entitled to a patent unless he did not himself invent the subject matter sought to be patented." The word "he" refers to the inventive entity named on the patent. Pannu v. Iolab Corp., 155 F.3d 1344, 1349 (Fed. Cir. 1998). Accordingly, this subsection is deemed to require that a patent accurately list the correct inventors of a claimed invention; misjoinder or nonjoinder of the correct inventors renders the patent invalid. Id. The parties have filed cross-motions with respect to § 102(f).

HD cites to portions of Budde's deposition testimony in which he describes the contributions of the engineers who predated Knapp, specifically Lang and Hankins; states that the invention was completed in 1986; states that he did not name Lang as an inventor because he was just paid to do a job; and states that he did not name Hankins for the same reason and because Hankins had a drinking problem. Budde Depo., 82:16 - 83:2; 85:24 - 87:2; 99:9 - 101:17; 279:1-15; 281:1-18; 390:1 - 391:2. Budde cites to other portions of his deposition in which he states that Knapp is the engineer who "redid" the project. Budde Depo., 576:9-11; 532:11-15. Budde also cites to his declarations and to Knapp's deposition and declaration, discussed above, all of which indicate that Knapp did not rely upon the work of Lang and Hankins but designed the electronics from scratch. Based upon this record, the Court concludes that there are triable issues of material fact as to whether Lang and Hankins contributed to the invention that is covered by the 348 patent.

C. Inequitable Conduct Before The PTO (Cross-Motions)

This defense is in essence a restatement of the defenses discussed above. HD asserts that Budde failed to disclose to the PTO that the invention was publicly used and on sale prior to the critical date, and that he had failed to name all inventors. The parties have filed cross-motions with respect to the inequitable conduct defense. Because there are triable issues with respect to the public use and on sale bars, and with respect to the contributions of persons other than the named inventors, there is a triable issue with respect to the inequitable conduct defense.

D. § 102(a) -- "Known Or Used By Others" (Budde's Motion)

Under 35 U.S.C. § 102(a), a person is entitled to a patent unless "the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent." 35 U.S.C. § 102(a). HD asserts that if the invention of Budde and Knapp was completed in 1989, it is invalid because substantially the same invention was completed by the separate team of Budde, Lang and Hankins in 1986. Only Budde moves for summary judgment as to this defense. As is discussed above, there are triable issues as to whether the contributions of Lang and Hankins are reflected in the invention that ultimately was patented. Accordingly, judgment is not appropriate with respect to this defense.

E. § 103 -- Obviousness (Budde's Motion)

Under 35 U.S.C. § 103(a), "[a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). Obviousness is a conclusion of law based upon factual determinations. Environmental Designs, Ltd. v. Union Oil Co. of California, 713 F.2d 693, 695 (Fed. Cir. 1983). Those factual determinations involve: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) the level of ordinary skill in the pertinent art; and (4) additional evidence, which may serve as indicia of non-obviousness. Id.

HD claims that a motorcycle known as the Ducati 851 is prior art, and that the Ducati 851, combined with other prior art, renders the 348 patent invalid for obviousness. Only Budde moves for summary judgment with respect to the § 103 defense, asserting that the Ducati 851 is not prior art to the 348 patent because it was not in public use or on sale in the United States prior to the critical date. In opposition to the motion, HD submits documents attached to the declaration of John Scheller. These documents were obtained from the American Motorcyclist-Association ("AMA"), from various publications and from the Internet, and are sufficient to create a triable issue of material fact as to whether the Ducati 851 was in public use or on sale in the United States prior to the critical date.

Budde moves to strike the documents as not properly authenticated and as hearsay. However, the Court concludes that the documents are properly authenticated and are admissible. A number of the documents are periodical publications admissible under Fed. R. Evid. 902(6). The documents produced by the AMA are admissible as business records under Fed. R. Evid. 803(6). The remaining documents are properly authenticated under Fed. R. Evid. 901. Based upon these documents, which describe the Ducati 851 and other prior art from the relevant time frame, the Court concludes that there are triable issues of material fact as to whether the 348 patent is invalid for obviousness under § 103.

F. § 112 -- Best Mode, Enablement, Indefiniteness, Written Description (Budde's Motion)

HD asserts four defenses under 35 U.S.C. § 112: (1) Budde failed to provide the best mode for his invention to the PTO; (2) the patent is not enabled without Budde's instruction manual; (3) the claims of the patent are indefinite; and (4) the claims of the patent fail the written description requirement of § 112. Only Budde moves for summary judgment with respect to the § 112 defenses.

Under § 112, a patent "shall set forth the best mode contemplated by the inventor of carrying out his invention." A best mode analysis has two components. Chemcast Corp. v. Arco Industries Corp., 913 F.2d 923, 927 (Fed. Cir. 1990). First it must be determined whether the inventor knew of a mode of practicing the claimed invention that the inventor considered to be better than any other at the time the inventor filed the patent application. Id. at 928. If so, the second part of the analysis compares what the inventor knew with what was disclosed. Id. The relevant question is whether the disclosure was adequate to enable one skilled in the art to practice the best mode; in other words, whether the inventor "concealed" the preferred mode from the public. Id. Compliance with the best mode requirement is a question of fact. Id. Budde's motion asserts that HD cannot prove by clear and convincing evidence that he failed to satisfy the best mode requirement. HD's opposition references an instruction manual that Budde prepared for his fuel injection system. The instruction manual contains more detailed installation instructions than are contained in the patent. Budde's reply asserts that this manual cannot constitute evidence that he failed to provide the best mode to the PTO, because the manual was prepared after the patent application was filed. However, it could be inferred that the manual reflects knowledge Budde had prior to its preparation, i.e., prior to the filing of the patent application. It is unclear whether the contents of the manual reflect a failure to disclose the best mode to the PTO. Accordingly, there is a triable issue of material fact as to this defense.

Section 112 requires that "the specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." HD asserts that the patent is not enabled without reference to the manual discussed above. Budde's motion characterizes this assertion as "ludicrous." However, HD cites to White's deposition testimony that one of ordinary skill in the art would need the manual to use the claimed conversion system. White Depo., 278:16-25; 282:8-14. Accordingly, there is a triable issue of material fact as to whether the invention is enabled without the manual.

Section 112 requires an adequate written description of the claimed invention and requires that the claims be so definite that one skilled in the art would understand what is claimed when read in light of the specification. HD asserts that, if the patent can be construed to cover its EFI systems as argued by Budde, the patent fails the written description and the definiteness requirements because one skilled in the art would not understand the patent to cover a number of features of the HD EFI systems. HD relies upon the declarations of its experts, discussed extensively in connection with the infringement analysis, for the proposition that the patent does not clearly claim several elements of HD's EFI systems. Budde contends that this assertion is merely a rehash of HD's infringement arguments, and cites generally to the report and supplemental report of White. The Court concludes that Budde has failed to establish his entitlement to judgment as to these defenses.

G. Summary Judgment Is Not Appropriate With Respect To The Affirmative Defenses

Based upon the foregoing analysis, the Court concludes that there are triable issues of material fact with respect to all of the affirmative defenses asserted by HD. Accordingly, the Court will deny the parties' cross-motions with respect to the affirmative defenses.

IV. ORDER

(1) Defendants' motion for summary judgment of noninfringement is GRANTED and Plaintiff's motions for summary judgment of infringement are DENIED;

(2) the parties' cross-motions for summary judgment with respect to Defendants' affirmative defenses are DENIED;

(3) the parties' motions to strike evidence are DENIED with respect to the evidence relied upon by the Court; and

(4) because summary judgment of noninfringement is dispositive of the instant case, the Clerk shall enter judgment and close the file.

DATED: July 29, 2003

JEREMY FOGEL

United States District Judge

JUDGMENT

Defendants' motion for summary judgment of noninfringement having been granted,

IT IS HEREBY ORDERED AND ADJUDGED that Plaintiff take nothing and that judgment be entered for Defendants.

DATED: July 29, 2003

JEREMY FOGEL

United States District Judge

Footnotes

n1 The 348 patent contains thirteen claims. The claim construction and the present motions focus only upon independent claim 1 because all disputed limitations appear in that claim.

n2 The Court's conclusion that the conversion system limitation can read on original equipment renders irrelevant HD's evidence that it does not manufacture after-market conversion kits.

n3 Budde moves to strike the declarations of David Jones, Patrick Farrell and V. Dennis Lodise on the ground that these declarations contain improper expert opinions. HD timely disclosed Jones as an expert and timely produced his expert report. HD timely disclosed Farrell and Lodise as rebuttal experts and timely produced rebuttal reports of Jones, Farrell and Lodise. Although Budde never says so explicitly, he appears to be asserting that the current declarations of Jones, Farrell and Lodise improperly exceed the scope of their previously produced reports. However, Budde fails to specify how the current declarations differ from the reports. His motion to strike does not compare any particular portions of the current declarations to the reports and certainly does not show that the current declarations go beyond the scope of the reports. -- Accordingly, Budde has failed to demonstrate that the current declarations should be stricken as containing improper expert opinions. Because Budde filed this motion to strike on Thursday, June 19, only two court days before the hearing on Monday, June 23, HD did not have an opportunity to respond. Having concluded that the motion is unmeritorious on its face, the Court need not solicit a response from HD.

n4 HD moves to strike Knapp's declaration as containing improper and belated expert testimony, hearsay and testimony lacking adequate foundation. With respect to the date the invention was completed, the Court has considered Knapp's testimony only as a percipient witness; therefore, HD's objections do not apply.

Case No. C-98-20447-JF (EAI)

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

WILLIAM A. BUDDE,
Plaintiff,

v.

HARLEY-DAVIDSON, INC. and
HARLEY-DAVIDSON MOTOR COMPANY
Defendants.

ORDER fn1 CONSTRUING CLAIMS OF UNITED STATES PATENT NO. 4,955,348

On January 14, 1999, the Court held 'a hearing to construe disputed language in the claims of United States Patent No. 4,955,348 (the "'348 patent"). After considering the arguments and evidence presented by Plaintiff and Defendants, the Court construes the disputed language as set forth below.

I. BACKGROUND

Plaintiff William A. Budde ("Budde") is an inventor who operates a business which repairs, renovates and designs motorcycles. Budde's business also sells after-market products for motorcycles: Budde's '348 patent relates to a fuel injection conversion system for reciprocating motorcycles engines, and more specifically to a fuel injection conversion system for V-twin motorcycle engines.

V-twin motorcycle engines are those in which two cylinders are arranged so as to form a V. For many years, such engines have used a carburetor as a means of providing fuel and air to the engine. Fuel injection provides a more efficient means of providing a fuel-air mixture to the engine. Until recently, implementation of fuel injection systems in V-twin motorcycles was rare due to the difficulty inherent in accurately determining how much fuel to provide for each stroke of each cylinder of the reciprocating engine. Using the apparatus described in the '348 patent, a V-twin engine may be adapted to use a fuel injection system.

Defendants Harley-Davidson, Inc. and Harley-Davidson Motor Company (collectively "Harley-Davidson") are in the business of designing, manufacturing and marketing motorcycles. This action arises from Budde's. allegations that several of Harley-Davidson's motorcycles infringe the '348 patent.

II. LEGAL STANDARD

It is well settled that claim construction is a question of law to be decided by the Court. See. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed Cir. 1995) (in banc), aff'd., 517 U.S. 370 (1996). When interpreting a claim, the Court must look first to the intrinsic evidence of record: the patent claims, the specification, and, if in evidence, the prosecution history. See Vitronics Corp. v. Conceptronic, Inc.,90 F. 3d 1576, 1582 (Fed. Cir. 1996). The words used in the claims and specification generally will be given their ordinary and customary meaning. See id.

However, the patentee may choose to be his own lexicographer and may use terms in a manner other than their ordinary meaning so long as the special definition is stated clearly in the patent specification or file history. See id. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication, and is considered to be "the single best guide to the meaning of a disputed term."

In most situations, analysis of the intrinsic evidence will resolve any ambiguity regarding a disputed claim term. See id. at 1583. In such circumstances, the Court may not rely on extrinsic evidence. See id. However, where the, intrinsic evidence is ambiguous to a disputed term or the scope of the invention, the Court may turn to extrinsic evidence such as dictionaries, expert testimony, prior art, technical treatises and inventor testimony. See id. at 1584. Furthermore, a court may accept "the testimony of the parties' expert witnesses for the purpose of background in the technical area at issue" and then "bas[e] its claim construction solely on the intrinsic evidence." Mantech Environmental Corp. v. Hudson Environmental Services, Inc. 152 F.3d 1368, 1373 (Fed. Cir. 1998) (internal quotations omitted). Technical background information "always may be admitted by the trial court to educate itself about the patent and the relevant technology , . .

III. DISCUSSION

The '348 patent contains 13 claims, of which claims 1 and 13 are independent. Claims 2 through 12 are each dependent on claim 1. As all seven disputed terms appear in claim 1, the Court addresses only that claim. With disputed terms underlined, Claim 1 reads as follows:

1. A fuel injection conversion system for V-twin motorcycle engines having two cylinders, an ignition system, and a fuel source, comprising

an intake manifold providing separate ducts for delivering a separately to each cylinder,

a pair of fuel injectors mounted in a fuel injector and throttle body secured to said intake manifold,

a fuel distributor for delivering an individual pressurized flow to each of said injectors,

a fuel pump for delivering a pressurized fuel flow from the fuel source to the fuel distributor,

a fuel flow pressure regulator for controlling the pressure of the fuel flow delivered by the distributor to said injectors,

an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto,

a throttle potentiometer for sensing the position of the throttle and producing an electronic signal in response thereto,

a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom, and

a control unit which discriminates which spark plug of the engine is firing a fuel-air mixture charged cylinder of the engine from the asymmetrical spark plug firing order related electronic signal from said electronic sensing means, said control unit electronically integrating the electronic signals from the throttle potentiometer, the electronic sensing means, and the status sensing means to generate electronic signals which control the fuel injectors and operate them at the proper time and for the calculated duration to deliver the proper amount of fuel to said cylinders for the engine operating conditions by timed injection.

The Court addresses each disputed term in turn. A.

A. "Conversion system"

The first disputed term, "conversion system," appears in the preamble of the claim. Harley-Davidson argues that even though this term appears in the preamble, it acts as a limitation on the claim. Budde argues that the claim is not limited by this preamble term.

The preamble of a claim does not limit the scope of a claim when it simply states a purpose or intended use of the invention. See Loctite Corp. v. Ultraseal Ltd., 781 F. 2d 861, 868 (Fed. Cir. 1985), overruled on other ground by Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed. Cir. 1998). However, if it says more, it may limit the scope of the claim because the determination as to whether a preamble imposes a limitation is determined on a case by case basis. See In re Stencel, 828 F.2d 751, 754 (Fed. Cir. 1987). "[A] claim preamble has the import that the claim as a whole suggests for it. In other words, when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects." Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 620 (Fed. Cir. 1995).

The specification of the '348 patent states that it is "an important object of the present invention to provide a fuel injection conversion system for V-twin motorcycle engines which converts them from carburetion to fuel injection." Col. 2, ln. 37-40. fn2 Nothing in the specification indicates, however, that the patent does not cover a fuel injection system designed by an original manufacturer to fit an engine it has previously manufactured only with a carburetor. Thus, while the term "conversion system" is a limitation on the claim, it does not preclude coverage of systems included in original equipment. The term "conversion system" requires a fuel injection system suitable for an engine that can be operated as a carbureted engine, regardless of whether the fuel injection system was designed as an after--market product or as original equipment.

B. "Fuel and air mixture"

The second disputed term, "fuel and air mixture," appears in the first element of the claim as follows:

"an intake manifold providing separate ducts for delivering a fuel and air mixture separately to each cylinder." Budde argues that this claim language is clear on its face, and that it requires that the intake manifold have separate ducts for delivery of a fuel and air mixture to each of the cylinders. Harley-Davidson argues that one of ordinary skill in the art would understand this claim element as requiring a throttle body injection system, as opposed to a port injection system.

The difference between a "throttle body injection system" and a "port injection system" lies in the location of the system's fuel injectors. In a throttle body injection system, the fuel injectors are located in the throttle body. In a port injection system, the fuel injectors are located closer to the cylinder ports.

Nothing in this claim element, however, indicates the location of the fuel injectors. Rather, this element is directed simply to the configuration of the intake manifold. Therefore, Harley-Davidson's argument regarding the-distinction between throttle body and port injection systems is irrelevant to a proper interpretation of this term. This term simply requires an intake manifold with two ducts, each of which separately delivers a fuel and air mixture to a cylinder.

G. "Pair of fuel injectors mounted in a fuel injector and throttle body"

The third disputed term is a "pair of fuel injectors mounted in a fuel injector and throttle body secured to [the] intake manifold." Budde argues that this language is clear on its face, and that it requires that two fuel injectors be mounted in a body referred to as a "fuel injector and throttle body." Harley-Davidson argues that this claim element requires a throttle body injection system, as opposed to a port injection system. However, neither the claims nor the specification include reference to "throttle body injection" or "port injection." Therefore, a proper interpretation of this term need not require any particular type of fuel injection system. Rather, the language of this claim element simply requires that two fuel injectors be mounted in a fuel injector and throttle body. The language of this claim element further requires that the fuel injector and throttle body be secured to the intake manifold.

D. "Individual pressurized fuel flow"

The fourth disputed term is a "fuel distributor for delivering an individual pressurized fuel flow to each of [the fuel] injectors." The specification describes the operation of the fuel distributor as follows: "a fuel pump . . . is electrically driven for delivering a pressurized fuel flow to a fuel distributor 33 in the form of a fuel rail which delivers an individual pressurized fuel flow to each of the injectors 11." Col. 4, ln. 50-53. Although the specification describes a fuel rail as a form of fuel distributor, nothing in the claim limits it to this particular embodiment. This term thus requires a fuel distributor to deliver a separate fuel flow to each fuel injector and further requires that the fuel flow be pressurized. fn3

E. “Electronic sensing means”

The parties agree-that the fifth disputed term is a claim element written in means-plus-function form. In construing means-plus-function claim elements, courts should first identify the particular function claimed, and then “consult the specification to define the structure, material or acts corresponding to this claimed function.” Sage Products, Inc. v. Devon Industries, Inc., 126 F.3d 1420, 1428 (Fed. Cir. 1997); See also 35 U.S.C. § 112, ¶ 6. The disputed term at issue is “an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto.”

The parties agree that this claim element requires performance of the following two functions: (1) determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders; and (2) producing an electronic signal in response thereto. The parties do not agree, however, on whether the specification discloses any structure, material or acts corresponding to the claimed functions.

Budde asserts that a structure capable of performing these two functions is disclosed in the following passage from the specification:

> In the present invention, sensors are utilized to obtain a timing signal from the ignition system which is inputted to the control unit of the fuel injection system for utilization in controlling the operation of

the fuel injectors. The Electronic ignition systems use sensors that may be optical (usually infrared), or magnetic (usually Hall effect devices). These sensors detect the windows cut in the sides of a metallic "cup" that is attached to the end of the cam shaft. Each window corresponds to a plug firing and the angle between the windows corresponds to the angle between the cylinders. . . . The output of the Electronic ignition system sensor is used directly by the control unit of the present invention.

Col. 5, ln. 31-45. Based on this passage, Budde argues that the specification discloses an optical sensor and a magnetic Hall effect device, each capable of performing the claimed functions. In addition, Budde contends that a structure capable of performing the claimed functions is disclosed in Figure 3 of the '348 patent.

In opposition to Budde's assertions, Harley-Davidson maintains that the specification of the '348 patent does not disclose any structure corresponding to the functions claimed in the element at issue. Harley-Davidson is correct. Neither the text nor the figure cited by Budde discloses structure capable of determining when the ignition system of the engine delivers an electronic pulse to fire the spark plugs.

The first sentence of the text cited by Budde identifies the function to be performed by the claimed electronic sensing means. This statement of function corresponds to that contained in the claim, but does not disclose any structure. The text proceeds to identify two types of sensors utilized by ignition systems in Harley-Davidson carbureted engines and which Budde argues perform the claimed functions. A close examination of the passage cited by Budde, however, reveals that neither of the two sensors described performs the function of the electronic sensing means. The passage explains that the two types-of sensors detect windows in a cup mounted to the cam shaft and that these windows correspond to spark plug firing. The infrared and magnetic sensors thus do not sense when the ignition system delivers an electronic pulse to fire the spark plug. Instead, they detect windows in a cup. Although these windows correspond to a period of time in which the spark plugs may fire, they do not reveal precisely when during that window of time the plugs actually fire. More importantly, however, the electronic sensing means called for by the claim may not be a structure that senses the posit ion of the cam shaft. "The present invention is designed to acquire the required timing information for providing the fuel injectors with their instructions by picking up an electronic pulse off the ignition system." Col. 2, ln. 21-24 (emphasis added). The electronic sensing means must sense an electronic pulse being sent to the spark plugs, a function which the two types of sensors described in the specification do not perform.

In addition to the above discussed text from the specification, Budde maintains that Figure 3 of the '348 patent discloses a structure the corresponds to the electronic sensing means. Figure 3 "is a block diagram of the fuel injection controller." Col. 3, ln. 5-6. In the lower left corner of this block diagram is a line labeled "Ignition Input Lines." See Fig. 3. Budde contends that the line thus labeled discloses structure corresponding to the electronic sensing means. The

Court does not agree. Even if the "Ignition Input Lines" portrayed in Figure 3 carry the electronic signal that the electronic sensing means is claimed to produce, no structure for sensing when the ignition system delivers an electronic pulse to fire the spark plug is disclosed. The '348 patent thus fails to disclose any structure corresponding to the claimed function of the electronic sensing means.

F. "Status sensing means"

The parties agree that the sixth disputed term, like the fifth disputed term, is written in means-plus-function form. Once again, the Court must identify the particular function claimed in this element, and then "consult the specification to define the structure, material or acts corresponding to this claimed function." Sage Products, 126 F.3d at 1428. The disputed term at issue is "a status sensing means for measuring a combination of air intake and. engine temperature, and vacuum in the intake. manifold and producing electronic signals there from."

The function claimed in this element is three-fold:

(1) measure a combination of air intake and engine temperature; (2) measure vacuum in the intake manifold; and (3) produce electronic signals from those measurements.

The parties agree that the ,specification discloses a thermistor capable of performing the first of these functions. The thermistor described in the specification is able to measure a combination of the air temperature and the engine temperature because it is located "in the air intake chamber but with a resulting thermal path to the cylinders through the throttle body. This generates a signal that is the integration of the usual separate measurements of air temperature and engine temperature." Col. 6, ln. 31-35. The parties agree that the thermistor also produces an electronic signal from this measurement.

The parties do not agree, however, on whether the-patent sufficiently discloses structure capable of measuring vacuum in the intake manifold and then producing an electronic signal from that measurement. The language in the specification which corresponds to the vacuum sensing means states that the "vacuum sensors are commercially available units which produce analog signals for the control unit." Col. 6, ln. 38-40. In addition to this text, the block diagram of the fuel injection controller includes a box labeled VACUUM SENSOR, identified as element 305. See Fig. 3. According to Budde, the box representation of a vacuum sensor and the textual reference to "commercially available units which produce analog signals" provide adequate disclosure of structure for a claim element written in means-plus-function form. Harley-Davidson, on the other hand, argues that such a description does not meet the disclosure requirements of 35 U.S.C. 5 112, ¶ 6. fn4

Referring to the disclosure requirement of § 112 ¶ 6, the Federal Circuit has stated that "[f]ailure to describe adequately the necessary structure, material, or acts in the written description [of - a patent] means that the drafter has failed to comply with the mandate of [35 U.S.C.] § 112 ¶ 2 . . . ." In re Dossel, 115 F.3d 942, 946 (Fed. Cir. 1997); see also In re Donaldson, 16 F.3d 1189, 1195 (Fed. Cir. 1994) ("[I]f one employs means-plus-function language in a claim, one must set forth in. the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.").

Paragraph two of § 112 requires a patent specification to "conclude with one or-more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. The Federal Circuit has stated that § 112 ¶ 2 "is essentially a requirement for precision and definiteness of claim language." PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1562 (Fed. Cir. 1996) (quoting In re Borkowski, 422 F.2d 904, 949 (C.C.P.A. 1970)(emphasis in original).

The box labeled VACUUM SENSOR and the passage describing "commercially available units" meet the definiteness requirement of ¶ 2 "The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope." In re Warmerdam, 33 F.3d 1354, 1361 (Fed. Cir. 1994). Vacuum sensors were well known in the art of motorcycle engine manufacturing at the time the patent issued. The phrase "commercially available units" particularly and distinctly pointed out to those of ordinary skill in the art the vacuum sensors the '348 patent claimed. Accordingly, the structure which corresponds to the vacuum sensing means is a vacuum sensor which produces an analog signal and which was commercially available at the time the patent was issued.

Harley-Davidson argues that the Court's interpretation of this claim element is unreasonably broad because any vacuum sensor commercially available at the time the patent was issued falls within the Court's interpretation. This argument, however, is directed to the scope of the interpretation, rather than to the claim element's definiteness. Just as "[n]arrowness can not be equated with definiteness, " Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1583 (Fed. Cir. 1996) (Nies, J., concurring)," [b]readth is not indefiniteness." (quoting In re Gardner, 427 F.2d 786 (C.C.P.A. 1970)). The broad nature of the Court's interpretation of the vacuum sensing means does not render it indefinite.

G. "Control unit"

The seventh and final disputed term is "control unit." The parties agree this is a structural claim element, but disagree as to whether the control unit must use an algorithm to operate. Budde argues that no algorithm is required, while Harley-Davidson asserts that the patent requires a particular algorithm.

The claim itself requires that the control unit determine which spark plug of the engine is firing a charged cylinder based on "the asymmetrical spark plug firing order related electronic signal from [the] electronic sensing means." The specification clarifies this language by explaining that the control unit "identif[ies] the cylinder charging sequence from the measurement of the different time durations between the asymmetrical spark firings." Col. 11, ln. 46-49. The control unit must determine which spark plug of the engine is firing a charged cylinder at any given moment based on the different time periods between spark firings, but neither the claim nor the specification requires the control unit to utilize a particular algorithm to do so. Therefore, no algorithm is necessary for this portion of this claim element.

In addition to determining spark plug firing order, the claim requires the control unit to integrate "the electronic signals from the throttle potentiometer, the electronic sensing means, and the status sensing means to generate electronic signals which control the fuel injectors . . . ." Thus, the control unit must control the fuel injectors based on electronic signals derived from the signals of the throttle potentiometer, the electronic sensing means, and the status sensing means. Again, however, neither the claim nor the specification require; the control unit to utilize a particular algorithm to do so. Accordingly, the control unit need not utilize any particular algorithm to operate.

IV. ORDER

For the foregoing reasons, the Court construes the '348 patent as set forth above.

DATED: 1-29-99

JEREMY FOGEL
United States District Judge

Footnotes

fn1 This disposition is not designated for publication and may not be cited.

fn2 All references of the form "Col. 2, ln. 37-40" refer to the specification of the '348 patent.

fn3 In the context of this disputed term, Harley-Davidson 'raised the question-of whether its particular products, which utilize a "common fuel cavity," fall within the scope of the claim. As this is a question of infringement, and as the Court will consider such questions later, the Court does not answer it in this Order.

fn4 "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof-" 35. U.S.C. § 112, ¶ 6.

03-1610, 03-1641

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

WILLIAM A. BUDDE,
Plaintiff-Appellant,

v.

HARLEY-DAVIDSON, INC. and HARLEY-DAVIDSON MOTOR COMPANY,
Defendants-Cross Appellants.

November 15, 2004, Decided
November 15, 2004, Filed

NOTICE: THIS DECISION WAS ISSUED AS UNPUBLISHED OR NONPRECEDENTIAL AND MAY NOT BE CITED AS PRECEDENT. PLEASE REFER TO THE RULES OF THE FEDERAL CIRCUIT COURT OF APPEALS FOR RULES GOVERNING CITATION TO UNPUBLISHED OR NONPRECEDENTIAL OPINIONS OR ORDERS.

OPINION: ORDER

A combined petition for panel rehearing and for rehearing en banc having been filed by the APPELLANT, and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc having been referred to the circuit judges who are in regular active service, UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for panel rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on November 22, 2004.

(Precedential)	RF Delaware, Inc. v. Pacific Keystone Technologies, Inc., BCA Industrial Controls (1995) Limited, Clear Water Technologies, Inc., and Michael Morris	02-1508	Yes	Yes	Yes – Reversed and Remanded

	Universal, Ltd. and Bausch & Lomb Incorporated				
(Precedential)	Anton /Bauer, Inc. and Alex Desorbo v. PAG, Ltd.	02-1487	No	No	No
(Precedential)	Dayco Products, Inc. v. Total Containment, Inc.	02-1497	Yes	Yes	Yes – Vacated and Remanded
(Precedential)	RF Delaware, Inc. v. Pacific Keystone Technologies, Inc., BCA Industrial Controls (1995) Limited, Clear Water Technologies, Inc., and Michael Morris	02-1508	Yes	Yes	Yes – Reversed and Remanded

(Precedential)	Phonometrics, Inc. v. Westin Hotel Co.	02-1314	Yes	No	No
(Precedential)	Silent Drive, Inc. v. Strong Industries, Inc. and Brooks Strong	02-1329	No	No	No
(Precedential)	Abbott Laboratories and Gournier Industrie et Santé and Laboratories Fournier S.A. v. Novopharm Limited	02-1387	Yes	No	No
(Precedential)	Allergan, Inc. and Allergan Sales, Inc. v. Alcon Laboratories, Inc. Alcon Research, Ltd., and Alcon	02-1449	No	No	No

	Poulenc Rorer, S.A. and Centre National de la Scientifique v. Bristol-Myers Squibb Company				
(Precedential)	Paradise Creations, Inc. v. U V Sales, Inc.	02-1283	No	No	No
(Precedential)	Apex Inc. v. Raritan Computer, Inc.	02-1303	Yes	Yes	Yes – Vacated and Remanded
(Precedential)	Springs Window Fashions LP, Shade-O-Matic Ltd, and Manor Tec, Inc. v. Novo Industries, L.P.	02-1309, -1347	Yes	No	No

	and Level One Communications, Inc.				
(Precedential)	Darrel A. Mazzari and Michael T. Sheedy v. James E. Rogan, Director, Patent and Trademark Office	02-1269	No	No	No
(Precedential)	Bristol-Myers Squibb Company v. Rhone-Poulenc Rorer, Inc., Rhone-Poulenc Rorer, S.A. and Centre National de la Recherche Scientifique Rhone-Poulenc Rorer, Inc., Rhone-	02-1280, -1281	No	No	No

	L.P., Stratagene Holding Corporation and Stratagene, Inc.				
(Precedential)	Intel Corporation v. Via Technologies, Inc., a California Corporation, Via Technologies, Inc., a Taiwain Corporation	02-1212, -1213	No	No	No
(Precedential)	Duro-Last, Inc. v. Custom Seal, Inc.	02-1218, -1262	No	No	No
(Precedential)	Storage Technology Corporation v. Cisco Systems, Inc. and Cisco Technology, Inc.	02-1232	Yes	Yes	Yes – Affirmed-in-part, Vacated-in-part, and Remanded

	Charrin				
(Precedential)	Fleuer T. Tehrani, PhD., P.E. v. Hamilton Medical, Inc. and Hamilton Medical, A.G.	02-1177, -1178, -1227	Yes	Yes	Yes – Vacated and Remanded
(Precedential)	Alan Waner v. Ford Motor Company	02-1184, -1185	Yes	Yes	Yes – Affirmed-in-part, Reversed-in-part
(Precedential)	Bio-Technology General Corp. v. Duramed Pharmaceuticals, Inc.	02-1195	Yes	Yes	Yes – Reversed and Remanded
(Precedential)	Invitrogen Corporation v. Biocrest Manufacturing,	02-1207, -1260	Yes	Yes	Yes – Vacated and Remanded

(Precedential)	Altiris, Inc. v. Symantec Corporation	02-1137, -1138	Yes	Yes	Yes – Vacate (summary judgment) and Remanded
(Precedential)	Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.	02-1145	Yes	Yes	Yes – Reversed and Remanded
(Precedential)	Micro Chemical, Inc. v. Lextron, Inc. and Turnkey Computer Systems, Inc.	02-1155	No	No	No
(Precedential)	Prima Tek II, L.L.C., and Southpac Trust International, Inc. v. Polypap, S.A.R.L., Philippe Charrin, and Andre	02-1164	Yes	Yes	Yes – Vacate (summary judgment) and Remanded

(Precedential)	Micro Chemical, Inc. v. Lextron, Inc. (formerly known as Great Plains Chemical Co., Inc.)	02-1121	No	No	No
(Precedential)	In re Lance G. Peterson and Ioannis Vasatis	02-1129	No	No	No
(Precedential)	Oakley, Inc. v. Sunglass Hut International, Lenscrafters, Inc. Ray Ban Sun Optics, Luxottica Group S.P.A., and Leonard del Vecchio	02-1132	Yes	No	No

	David A . Cheresh				
(Precedential)	Pandrol USA, LP (for and on behalf of the Board of Trustees of Florida State University), MDS Research Foundation, Inc., and Taxolog, Inc. v. American Bioscience, Inc. (formerly known as Vivorx Pharmaceuticals, Inc.) and Chunlin Tao	02-1109	No	No	No
(Precedential)	In re Richard A. Berg, Paul D. Toman and Donald G. Wallace	02-1120, -1160	No	No	No

(Precedential)	Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corporation and Schering Corporation	02-1026, -1027	Yes	Yes	No – Error was harmless
(Precedential)	Riverwood International Corporation v. R.A. Jones & Co., Inc.	02-1030, -1154	Yes	Yes	No
(Precedential)	Intefra Lifesciences I, Ltd. and The Brunham Institute and Telios Pharmaceuticals, Inc. v. Merck KGaA and The Scripps Research Institute and Dr.	02-1052, -1065	Yes	No	No

(Precedential)	Plant Genetic Systems, N.V. and Biogen, Inc. v. Dekalb Genetics Corporation	02-1011	Yes	No	No+F77
(Precedential)	The Regents of the University of New Mexico v. Galen D. Knight and Terence J. Scallen	O2-1018, -1019	No	No	No
(Precedential)	Northrop Grumman Corporation v. Intel Corporation and Zircom Corporation and D-Link Systems, Inc. and the Linksys Group, Inc.	02-1024, -1182	Yes	Yes	Yes – Reversed and Remand.

	Technologies North America Corp., and Infineon Technologies Holding North America Inc.	02-1174, -1192			ment and remanded
(Precedential)	Dr. Raymond G. Tronzo v. Biomet, Inc.	01-1585	No	No	No
(Precedential)	Arjun Singh v. Anthony J. Brake	01-1621	No	No	No
(Precedential)	Eaton Corporation v. Rockwell International Corportation and Meritor Automotive Incorporated	01-1633, 02-1034, -1206	Yes	Yes	Yes – Vacated-in-part, Reversed-in-part, Affirmed-in-part

	Pharmaceuticals Inc.) and Transkaryotic Therapies, Inc.				
(Precedential)	Lacks Industries, Inc. v. McKechnie Vehicle Components USA, Inc. (doing business as Thompson International), and Hayes Wheel International, Inc. (now known as Hayes Lemmerz International, Inc.)	01-1371, -1395, -1396	Yes	No	No
(Precedential)	Rambus Inc. v. Infineon Technologies AG, Infineon	01-1449, -1583, -1604, -1641, -	Yes	Yes	Yes – Vacates grant of JMOL of noninfringe-

(Precedential)	Hoffman-La Roche, Inc. and Roche Molecular Systems, Inc. v. Promega Corporation	00-1372	No	No	No
(Precedential)	Biogen, Inc. v. Berlex Laboratories, Inc. and Schering AG	01-1058, -1059	Yes	No	No
(Precedential)	Moba, B.V., Staalkat, B.V. and FPS Food Processing Systems, Inc. v. Diamond Automation, Inc.	01-1063, -1083	Yes	Yes	Yes – Affirmed-in-part, Reversed-in-part, and Remanded
(Precedential)	Amgen Inc. v. Hoechst Marion Roussel, Inc. (now known as Aventis	01-1191, -1218	Yes	No	No

	Rong Hsiu and New Mayline Co., Inc., Mayline Enterprises, Inc., Jen-Hsien Liu, and George Li				
(Non-Precedential)	Atlantic Construction Fabrics, Inc. and George E. Logue, Jr. v. Dandy Products, Inc.	02-1451	Yes	No	No
(Precedential)	Pioneer Magnetics, Inc. v. Micro Linear Corporation	00-1012	No	No	No
(Precedential)	Lockheed Martin Corporation v. Space Systems/Loral, Inc.	00-1310	Yes	No	No

	Computing, Inc.				
(Non-Precedential)	James P. Logan, Jr. v. The Original Honeybaked Ham Company of Georgia, Inc., Honeybaked foods, Inc., and Mary J. Schmidt	02-1279	No	No	No
(Non-Precedential)	Stewart Larle v. Mattel, Inc.	02-1359	No	No	No
(Non-Precedential)	Phonometrics, Inc. v. ITT Sheraton Corp.	02-1417	No	No	No
(Non-Precedential)	Newspring Industrial Corporation v. Sun Gem Plastics Enterprise Co., Limited, and Biing	02-1450	Yes	No	No

(Non-Precedential)	Richard Lopes v. Hardware Distributors, Ltd and R.C. Rubber Company, and Jeff Waytahek	02-1146	No	No	No
(Non-Precedential)	William Frederick Robinson and Rosa Robinson and William Henry Robinson II v. Fakespace Labs, Inc.	02-1152	No	No	No
(Non-Precedential)	Xerox Corporation v. 3Com Corporation, U.S. Robotics Corporations, U.S. Robotics Access Corp., and 3Com	9201186, -1305, -1321	Yes	No	No

	Inc. (now known as Marconi Communications, Inc.)				
(Non-Precedential)	J.G. Peta, Inc. (doing business as Coverall Manufacturing) v. Club Protector, Inc., and William T. Held	02-1127, -1128	Yes	No	No
(Non-Precedential)	Deere & Company v. The Toro Company+B3	02-1136	Yes	Yes	Yes – Reverse summary judgment as to non-infringement Remanded

1

35. "...[T]he language of this claim element simply requires that two fuel injectors be mounted in a fuel injector and throttle body ... [and] further requires that the fuel injector and throttle body be secured to the intake manifold." Claim Const. Ord., p. 8, lns. 1-5.

36.

As shown above, HD's electronic fuel injection system incorporates provision for two fuel injectors into a housing that also incorporates the throttle control valve and an integral intake manifold. Therefore, HD's electronic fuel injection system literally includes two fuel injectors mounted in a throttle body and secured to (by being integral with) the intake manifold [Element 3]. The following shows (on the left of each image) a structure constructed in accordance with the disclosure in the '348 Patent and offered for sale by Budde, and (on the right of each image) HD's corresponding structure:

(Non-Precedential)	Morris Reese v. U.S. West, Inc., U.S. West Dex, Inc., and U.S. West Communications, Inc. v. Nortel Networks Inc. (formerly known as Northern Telecom Inc.), and Lucent Technologies Inc.	02-1633	Yes	No	No
(Non-Precedential)	Yoon Ja Kim v. The Eathgrains Company	03-1047	No	No	No
(Non-Precedential)	Bell Communications Research, Inc. (now known as Telcordia Technologies, Inc.) v. Fore Systems,	02-1083, -1084	Yes	Yes	Yes – Vacated Remanded

	Johnson, and Jeffrey Innovations, Inc. and Tyco International, Ltd., and Origin Medsystems, Inc.				
(Non-Precedential)	Glaxo Group Ltd. And Smithkline Beecham Corporation v. Apotex, Inc.	02-1492	Yes	No	No
(Non-Precedential)	John B. Adrain v. Hypertech, Inc.	02-1514	Yes	Yes	Yes – Reversed and Remanded
(Non-Precedential)	Garry L. Caputo v. Sealed Air Corporation	02-1556	Yes	No	No

	as Violets, and Ron Sheppeard				
(Non-Precedential)	Joseph Pastore v. Structure Guard Inc. and Florida Power and Light Company	02-1381	No	No	No
(Non-Precedential)	Marlow Industries, Inc. v. Igloo Products Corp	02-1386	No	No	No
(Non-Precedential)	Versa Corporation v. Ag-Bag	02-1416	Yes	Yes	No
(Non-Precedential)	T.F.H. Publications, Inc. v. Hartz Mountain Corporation	02-1460	No	No	No
(Non-Precedential)	Randy Williams, Chapter 7 Trystee for the Estate of Lana Davis	No	No	No	No

(Non-Precedental)	KIS, S.A., PMI Photomagic, Ltd., and Image Dynamics, LLC v. Foto Fantasy, Inc. (doing business as Fantasy Entertainment, Inc.) and American Photo Booths, Inc.	02-1263, -1264	Yes	Yes	Yes – Vacated Remanded
(Non-Precedential)	Phonometrics, Inc. v. Choice Hotels International, Inc.	02-1360	No	No	No
(Non-Precedential)	Donald W. Nutting, and individual doing business as Foothills Distributing Co. v. Ram Southwest, Inc., doing business	02-1361	No	No	No

					Remanded
(Non-Precedential)	Witold A. Ziarno v. The American National Red Cross	02-1147, -1253	No	No	No
(Non-Precedential)	Kensey Nash Corporation and St. Jude Medical, Inc. and Sherwood Medical Company and Tyco International (U.S.) Inc. v. Perclose, Inc.	02-1149	Yes	No	No – Fed Cir. Agreed with claim construction
(Non-Precedential)	Systems Division, Inc. v. Teknek LLC	02-1229	Yes	Yes – Construction not expressly reversed, but noted as incorrect	Yes – Summary Judgment Vacated Remanded

EXHIBIT A

(Findings from ABA IPL Newsletter, Summer 2003, Vol. 21, No. 4)

Status	CASE NAME	Number	Was Claim Construction at issue?	Was one or more claim constructions reversed?	Did it impact the result?
(Non-Precedential)	Molten Metal Equipment Innovations v. Metaullics Systems Co., L.P. and Metaullics Systems Co.	01-1409	Yes	No	No
(Non-Precedential)	Old Town Canoe Company v. Genwa Inc.	02-1144	Yes	Yes	Yes- Reverse in part, Vacate in part (summary judgment) and

Element 4- HD's Electronic Fuel Injection System Includes a Fuel Distributor to Deliver a Separate Fuel Flow.

37. Claim 1 of the '348 Patent recites "a fuel distributor for delivering an individual pressurized fuel flow to each of said injectors." '348 Patent, col. 12, lns. 35-36:.

38. "This term thus requires a fuel distributor to deliver a separate fuel flow to each fuel injector and further requires that the fuel flow be pressurized." Claim Const. Ord., p. 8, lns. 16-18.

39. HD admits that its electronic fuel injection system incorporates a "fuel cavity:"

"Also located within the induction module is a pressurized volume, called the fuel cavity in which a fuel regulator as well as the fuel injectors are submerged. The fuel feed line form the fuel tank delivers fuel to the cavity, the regulator maintains a constant pressure and the injectors both spray fuel from this single cavity when activated by the electronic control module." HD's Motion, p. 5, lns 2-6; p. 9, ln. 21 to p. 10 ln 1; Jones Decl. ¶ 6.

The "fuel cavity" comprises a "fuel distributor" to deliver a flow of fuel under "pressure" in HD's electronic fuel injection system.

40. Additionally, the fuel is distributed separately to each fuel injector. HD's electronic fuel injection system includes a fuel injection module that supplies each of two fuel injectors viz., a front fuel injector and a rear fuel injector, 1995 – 1996 FL: Models Service Manual,

* * *

C-98-20447-JFS

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

WILLIAM A. BUDDE,
Plaintiff,

v.

HARLEY-DAVIDSON, INC., et al.,
Defendants

San Jose, California
June 23, 2003

TRANSCRIPTS OF PROCEEDINGS BEFORE THE HONORABLE JEREMY FOGEL UNITED STATES DISTRICT JUDGE

APPEARANCES:

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Court Reporter

PETER TORREANO, CSR
License Number 7623

San Jose, California June 23, 2003

THE COURT: Okay. Now let's move on to Budde versus Harley-Davidson.

MR. RUSSO: Good morning, Your Honor. Jack Russo of Russo & Hale for Plaintiff William Budde and with me as well is my partner, Tim Hale, John Kelley and Bill Milks.

MS. BEST: Good morning, Your Honor. Don Best on behalf of Harley-Davidson. With me Russell Johnson from the Sidley Austin firm in San Francisco.

THE COURT: Good morning.

Thank you for your patience. I'm going to try to lay out an agenda and then you can really talk about whatever you want to talk about within the time you have.

The things that concern me the most and I'll preface this by saying this: What we have as a result of the Federal Circuit decision is a claim construction. So I think we're now looking at how that claim construction reads on the accused devices here.

And the first question that I have is how -- what is explicitly described as a conversion system reads on new fuel injection engines. And I understand it's addressed in the papers, but I need some more help with that because I still don't quite understand if Harley is making new motorcycle engines that don't involve a conversion from a carburetion system how these patents read on those devices at all.

And then the claim terms that are called out by Harley in its motion that I'm most concerned about are "control unit," "status sensing means," "separate ducts," "fuel injectors mounted in a throttle body," "intake manifold" and "electronic sensing means."

Because again in each of those instances the moving papers do appear to explain how the new machines don't utilize those structures at all and again it's addressed in Plaintiff's papers, but I could use some more help with that.

And I think that that subject matter is more -- is going to be a more useful focus of your oral argument than the motions to strike or the affirmative defenses for that matter. I think the invalidity case is what I'm concerned about.

Mr. Russo?

MR. RUSSO: Your Honor, I want to thank you first. You know we have a trial that's going on and I appreciate that you're allowing me to go near first here. And the way we divide this up among the lawyers was I was going to address a number of issues and given the volume of the papers in this case we actually have a team of lawyers who have been on this case and obviously will be on any further proceedings in this case.

I want to take just two minutes to lay out a little bit more where we think the Court needs to ultimately go in denying the Harley motions and either granting our motions or setting this case for trial and then I'm going to ask Mr. Milks to address your first set of comments or first set of questions and then Mr. Kelley to address your second set of questions.

I just start really for the benefit of myself and all that are here. We have some serious patent litigation by a great American company, Harley-Davidson, that had a great American product, which is a Harley-Davidson motorcycle, but we represent a great American inventor, Bill Budde, who created a great American invention, electronic fuel invention for the Harley-Davidson motorcycle. Harley-Davidson did not invent the concept of motorcycles. Bill Budde did not invent the concept of fuel injection. However, Harley invented the concept and implementation of the V-twin engine motorcycle and Budde did invent the concept and the implementation of electronic fuel injection with the help of Floyd Knapp.

A lot of what's going on in the back and forth on perhaps matters that you're simply taking under submission having to do with what was for sale and so on is an implementation that existed of Mr. Knapp. What we think you have to do in looking at all of these issues from the burden of proof and the law of the case that exists in the Federal Circuit now is you must apply the clear and convincing standard to all of these tests that seek to say that the work of Knapp and Budde were somehow invalid, that somehow there was a prior sale, a proper use and so on.

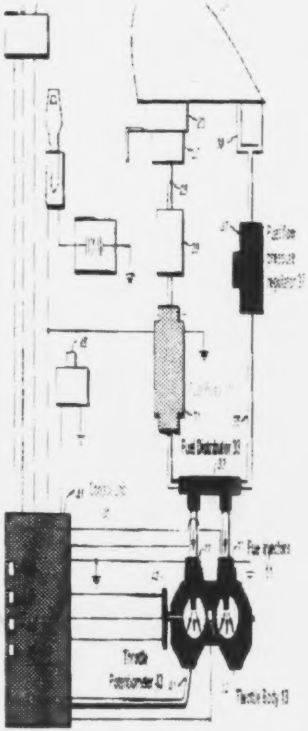
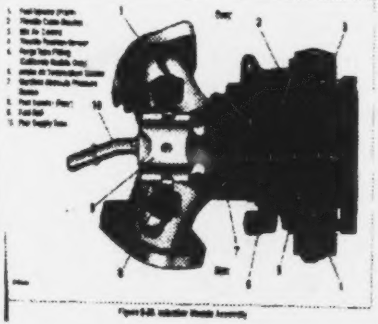
Now, I know your points are really directed to the infringement case. So I'm going to ask Mr. Milks to answer the Court's questions on that and then we'll ask Mr. Kelley to address the other, but I would just like to reiterate for the record. The law of the case as we see it and in particular several sentences in the Federal Circuit opinion are snippets of deposition transcript cannot change what the facts are.

Mr. Budde may have been wrong just as Mr. Knapp was found wrong by the Federal Circuit where the Federal Circuit said the fact that Mr. Knapp thinks there is no structure disclosed, that's irrelevant. That doesn't change what the clear and convincing standard is.

So with that, Your Honor, I'd like to hand it to Mr. Milks.

THE COURT: Okay.

			31, Figure 9-26 ("Induction Module Assembly"). (doctrine of equivalents infringement)

A pair of fuel injectors mounted in a fuel injector and throttle body [Element 3] secured to said intake manifold	Col. 4, lns. 6-8; Col 4, lns. 15-22 Fuel injectors 11 are mounted in a fuel injector throttle body 13 for delivering fuel from the injectors to the engine cylinders through the intake manifold 15. The throttle body 13 is secured to the intake manifold 15 which in turn is secured to the cylinder heads proximate the intake valves of the engine.	 Fuel Distributor Fuel injectors 11 Throttle Potentiometer Throttle Body 13	 HD's New EFI System provides a pair of fuel injectors secured to a fuel injector and throttle body assembly with integrated intake manifold. 2002 Harley-Davidson® Touring Models Service Manual, CMI-5.0M-12/01, Part No. 99483-02 (2001), p. 9-

			Separate ducts), delivering a fuel and air mixture separately to each cylinder. 2002 Harley-Davidson® Touring Models Service Manual CMI-5.0M-12/01, Part No. 99483-02 (2001), p. 9-31, Figure 9-26

MR. MILKS: Good morning, Your Honor. May it please the Court.

I believe you had addressed several of the elements of the claims of the '348 patent and specifically I think were focused on claim 1. I think that a lot of what we need to look at in terms of addressing your questions is, in fact, laid to rest by the Court's claim construction order as modified by the Federal Circuit.

I must point out that most, if not all, of the arguments that are being raised by Harley-Davidson by way of opposition to Mr. Budde's motions for summary judgment both with respect to the original fuel injection system and with respect to the new fuel injection system require modification of the claim construction.

THE COURT: All right. Say again. I lost you there. The claim construction was -- as I understand where we are in terms of law of the case, is that the claims construction is -- was either affirmed or was not the subject of the appeal with the single exception of the Court's conclusion that there was a lack of structure with respect to the vacuum sensor and that -- and that aspect of the Court's construction order was the subject of the reversal.

That's where we are. So I don't know that anything needs to be modified any further. The question is how do you respond to Harley's arguments that the claim as presently construed don't read on their devices?

MR. MILKS: Okay. Very well, Your Honor. We have the set of ground rules within which to deal. We just needed to be clear on that.

THE COURT: Okay.

MR. MILKS: With respect to the "conversion system" element, Harley-Davidson produces a motorcycle that is fuel injected, on the one hand, or carbureted, on the other hand. This applies both with respect to the original system and the new system.

Now, in Your Honor's casting of the issues here you're focused on the new system. Do you want me just to simply address the new system or the original system as well?

THE COURT: well, there's two. There's the '95 system and the current one.

MR. MILKS: Correct.

THE COURT: But, as I understand it, those are both -- they both come off the assembly line as fuel injection engines.

MR. MILKS: That's correct, Your Honor.

THE COURT: And, you know, going way back to when this case was first before me I thought what we were talking about was a system you could put on an old Harley-Davidson with the V-shaped carburetor-type engine and convert it into a fuel injection engine.

So how does that patent, which is clearly about converting carbureted engines to fuel injected engines, about new fuel injection engines that appear to be designed differently?

MR. MILKS: Well, Your Honor, if I may put up an exhibit here so we can focus specifically on the claim construction.

What Your Honor's claim construction order says is not to convert but, rather, the question that must be answered is whether or not it can be made suitable -- whether or not the fuel injection system is suitable for an engine that can be operated as a carbureted engine. "Suitable for" is different than "converting from" carbureted to fuel injection.

THE COURT: Okay.

MR. MILKS: I think that's an important point.

Secondly, we are focused on a manufacturer that supplies an overall motorcycle that has the engine with either the carbureted or the fuel injected engine. They are the direct infringer of the patent. They obtained certain parts and components from other companies, those companies being in the case of the original fuel injection system Marelli, Magneti Marelli USA, and on the second, the new system, the Delphi, which is the old Delco company.

They are the end infringer -- they are the direct infringer. Harley-Davidson is the direct infringer.

So we shouldn't segregate out whether there is some identifiable piece that can be pointed to with respect to Harley-Davidson's direct infringement. If we were going to do that, we would have to look at what Marelli supplied and/or what Delphi supplied.

THE COURT: Okay. But the engines that Harley is making both in '95 and at present never were carburetion engines. They don't have carburetors in them.

MR. MILKS: That's the point I'm making, Your Honor. An engine -- going back to the claim construction order, is the engine suitable to either be carbureted, on the one hand, or fuel injected, on the other hand.

THE COURT: It goes back to what an engine is then. The engine is the V-shaped thing that's in the front of the motorcycle?

MR. MILKS: Yes.

THE COURT: Okay. And that could have been designed for carburetion. It could have been designed for fuel injection. And if I'm understanding you correctly, the claim here is that in designing it for fuel injection Harley used ideas that were developed by your client?

MR. MILKS: Essentially, yes. Ideas which infringe the patent.

THE COURT: Right.

MR. MILKS: So if we start with the base engine, that is, to either be carbureted or fuel injected, we look at whether it's suitable for carburetion or suitable for fuel injection and, in fact, they are.

THE COURT: The basic shape of the engine hasn't changed.

MR. MILKS: The basic shape of the engine has remained essentially the same.

THE COURT: All right. So what goes on top of the V is the patented technology.

MR. MILKS: with respect to the fuel injected version, yes, Your Honor.

THE COURT: All right. It's very helpful. Thank you.

So if you could move on and talk about the specific claim terms that Harley is saying distinguish their technology.

MR. MILKS: well, they are saying up to seven or eight claim terms, Your Honor.

THE COURT: Right.

MR. MILKS: If we need to address them all, we will.

THE COURT: I would say why don't you pick the ones where you think they are the most wrong.

MR. MILKS: Well, within the scope of the claim construction by the Court as modified by the Federal Circuit they are wrong because every one of them requires some tweak.

THE COURT: Okay.

MR. MILKS: Let's look at "electronic sensing means" because I think --

THE COURT: Okay. Yeah. If one of them is wrong, then you win. So let's go there.

MS. BEST: No, Your Honor. They have to prove every one of the elements as present.

THE COURT: Okay. I'm sorry. I got it backwards. Never mind. You're right, Counsel. Go ahead.

MR. MILKS: Let's look at "electronic sensing means" because I think in terms of informing Your Honor about the parties' different views of what the Federal Circuit decided, that would be helpful to the Court. This is perhaps a little confusing here. I don't know if the Court can read this.

THE COURT: That's fine.

MR. MILKS: On appeal the Federal Circuit specifically looked at construing "electronic sensing means" as well as whether or not a structure related to the electronic sensing means was included in the disclosure in the '348 patent. And, in fact, the construction for "electronic sensing means" is set forth in the Federal Circuit opinion and I believe it's --

actually, although the page isn't up there, it's page 1380 of 250 F.3d.

What the court said after going through an extensive analysis of the disclosure in the patent was that, in fact, there are different types of electronic sensing means, one of which is an alternative called a magnetic sensor, for example, a Hall effect device, Hall effect device.

It is undisputed, Your Honor, that there's a Hall effect device in the original Harley-Davidson electronic fuel injection system that senses windows in a cup attached to the cam shaft of the engine.

The court goes on to say down at the bottom of this that these four sensors including the Hall effect device –

"Each of these sensors is structured corresponding to the claimed function of the electronic sensing means. They each determine when the engine's ignition system delivers a timing pulse to fire the spark plugs and produce electronic signals in response thereto."

The Hall effect device which is present in the original Harley-Davidson system, according to the explicit claims –

THE COURT: Okay.

MR. MILKS: -- construction, is there.

THE COURT: Okay. Do you have more? Yeah.

MR. MILKS: Okay. Let me turn to the new system.

THE COURT: Yeah.

MR. MILKS: In the new system Harley-Davidson eliminated the Hall effect sensor sensing the rotor cup. What they had instead is a variable reluctant sensor which is a type of magnetic sensor. The Federal Circuit refers to a magnetic sensor such as a Hall effect device.

The variable reluctant sensor sensing a pattern of teeth on a fly wheel attached to the crank shaft is the absolute equivalent of a Hall effect device sensing the windows in the rotor cup. Therefore, the new system also has electronic sensing means.

THE COURT: Okay.

MR. MILKS: Now, the Court of Appeals for the Federal Circuit also looked at "status sensing means" on appeal but affirmed Your Honor's construction of that term.

THE COURT: Okay.

MR. MILKS: So let's turn to "status sensing means" and let's look first at the new Harley-Davidson electronic fuel injection system. There's no dispute that it has what's called a manifold absolute pressure sensor for measuring vacuum in the intake manifold.

As to the original system, it is Mr. Budde's position that the function and the structure for performing the function requires an analysis of how Harley-Davidson configures their electronic fuel injection system using a lookup table which is generated or they use the term "mapped" by running the motorcycle engine on a dynamometer at the factory at a given altitude, whatever the altitude of that factory is.

They also include a manifold absolute pressure sensor. The same structure is disclosed in the patent to measure barometric pressure. At the time they determine the control of the fuel injectors, they obtain abase value out of that lookup table they generated at the altitude of the calibration of the motorcycle, modify that based upon the pressure value from the barometric pressure sensor to provide what essentially is a measurement of vacuum in the intake manifold and use that in terms of computing the time that the injector is turned on and how long they are left on before they are turned off again.

Therefore, the original system also has a status sensing means for sensing vacuum in the intake manifold.

That covers those two aspects.

Now, "pair of fuel injectors mounted in a fuel injector and throttle body." Harley-Davidson has concocted the proposition that you don't look at there being a fuel injector-mounting portion. They say "throttle body" is the operative structure completely ignoring where the fuel injectors are mounted. Once they do that they say if the remaining structure only comprises a throttle body and an intake manifold, well, Harley-Davidson's fuel injectors must be mounted in the intake manifold.

It's absolutely wrong, Your Honor. You have to look at the claim as construed, not a device and reverse-engineer an argument to come up with a notion that because it's closer to the throttle body in the Budde system and closer to the intake manifold in their system that the element is not present in the Harley-Davidson systems.

This is the same old argument of port injection versus throttle body injection that this Court summarily rejected during claim construction.

Is "intake manifold having separate ducts" a term that the Court wishes comment on?

THE COURT: I don't think that was one that I was real concerned about, although let me just double-check.

On that one I was concerned about the combustible mixture, not the claim itself, not enough to – the term itself but the presence or the non-presence of the combustible mixture.

MR. MILKS: Your Honor, this we believe is a red herring argument. There's nothing in the patent which talks about the level of combustibility of the fuel or the Budde system as claimed being intended to provide a higher or a lower combustibility of a fuel-air mixture.

The point is and this is supported by the deposition testimony of Budde's expert, Mr. White, that fuel and air are present at the outlet or the ducts of the intake manifold and go into the cylinder. Therefore, there is a presence of air and fuel in a mixture in the intake manifold before going into the engine.

Whether –

THE COURT: Combustibility doesn't matter?

MR. MILKS: Combustibility doesn't matter because it's not whether the mixture is combustible in the intake manifold. That's not where combustion takes place obviously. If it did, then the motorcycle would have a serious problem.

THE COURT: Yeah.

MR. MILKS: What is important is what is delivered to and put into the cylinder as the appropriate fuel-air mixture.

THE COURT: I had one other question for you and that had to do with the control unit.

MR. MILKS: Okay.

THE COURT: And the firing of the spark plugs, the simultaneous firing of the spark plugs. Another argument Harley makes is that their engines don't have that.

MR. MILKS: Your Honor, that's another red herring argument because nowhere in the Court's claim construction procedure or in the claim constructions that talk about the claims being limited solely to something which is -- what we call wasted spark or simultaneously fired spark plugs versus a system which fires them separately.

The difference is actually in the ignition system. In the one case of simultaneous fire there's one ignition coil that sends pulses to both spark plugs alternatively to fire them or, actually, sends sparks -- or sends pulses to both simultaneously to fire them simultaneously.

And in the other system, which is alternative fire, there are two coils, one dedicated to each spark plug.

Now, with respect to the control unit, let me go back to the Court's claim construction. "'Control' unit must determine which spark plug the engine is firing a charged cylinder at any given moment based on the different time periods between spark firings, but neither the claim or the specification requires the control unit to utilize a particular algorithm to do so."

Now, what the control unit does in the terms of claim 1 is to control the fuel injectors. It does this based on certain information. The information includes information from the status sensing means and information from the electronic sensing means.

We've already established that the electronic sensing means is present in the Harley-Davidson original and new systems. What that information does is to provide the input signal to the control unit as to the position of the engine appropriate for when the spark is to be fired by the ignition system.

What that means is that the rotor cup or the -- in the case of the original system or the crank shaft in the case of the new system is mechanically interconnected with the pistons, also with the valves, the valves being what lets fuel and air into the cylinders or exhaust out.

Now, because it's connected to the pistons and because it's imperative, in fact, it's critical, essential, that the ignition system and the fuel injection control system note where that piston is that information comes in as a signal from the electronic sensing means to the control unit. The control unit processes that information.

Now, it can do this by looking at the actual pulse train or pulse signal of the electronic sensing means which tells it the precise time at which the piston is in a particular location, whereupon the control unit determines when the spark plugs are to be fired.

In the case of Harley-Davidson's system they have a combined ignition and fuel injection control system called an electronic control module.

In Budde's system the control module is separated out or segregated out to control the fuel injectors. The same signal, however, is used for both ignition and is used for control of fuel injection because fuel injection has to be coordinated with injection again. If you fired a spark plug into the cylinder which doesn't have the appropriate position and the charge of fuel and air, the motorcycle is not going to work properly.

THE COURT: So you're saying that this is a distinction without a difference, that the simultaneous or non-simultaneous firing has nothing to do with the way the control unit actually works or what its function is.

MR. MILKS: That's correct, Your Honor.

THE COURT: Okay. Thank you.

Let me give equal time to the other side.

MS. BEST: Thank you, Your Honor.

I've prepared a short book of demonstrative exhibits to aid in the oral argument. I've already given one to opposing counsel.

THE COURT: Okay.

MS. BEST: Your Honor, the parties agree on one thing and that this -- and that is that this case is ripe for summary judgment. Each side has moved on the infringement and the validity issues and the Court has rendered its claim construction. We also have a Federal Circuit opinion and Harley-Davidson has submitted, not just one, but seven different reasons -- and those are identified at tabs A and B -- seven different reasons why the Harley original system and the new EFI system do not infringe the patent.

And Harley has also pointed out repeatedly the law of Warner-Jenkinson versus Hilton Davis. That's 520 US 17 at 39. And there the Supreme Court said that if a theory of equivalents would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court as there would be no material issue for the jury to resolve.

That case and that holding from that case is repeated throughout the briefing here by Harley-Davidson. It's never addressed by Plaintiff and that's because the way Plaintiff wants to construe this patent would literally vitiate a number of these elements, for example, "throttle body mounting," "conversion system," "delivering a fuel and air mixture," and the "control unit" limitation as well.

But given this limited time I can't cover all of the elements, but I do want to hit upon some of the ones that counsel did.

First of all, "conversion system." This Court ruled that the conversion system requires a fuel injection system suitable for an engine that can be operated as a carbureted engine.

We have submitted abundant evidence that Harley's system is not suitable. It requires --Harley's EFI system could not be applied to a carbureted engine without making massive mechanical alterations including different fly wheel, different fly wheel sensor, the cam shaft sensor and different fuel rail and lines.

THE COURT: Isn't their argument about what an engine is, they are saying the engine is the V that sits at the front of the motorcycle and then you put a carburetor or a fuel injected system on top of it and that your fuel injection system is derived from the patented technology?

MR. BEST: But that takes the words "conversion system" out of the patent.

THE COURT: It does, which is why I asked counsel the question.

MS. BEST: Your order does say it has to be suitable, but also it hasn't taken the words "conversion system" out. It still has to convert something. If you read the patent cover to cover, that's what this is about. It's fundamentally a system which allows you to convert a wide variety of carbureted motorcycles and the reason is it's simple. They are just picking up pulses rather than making these mechanical modifications.

And if we look at what the Federal Circuit said about this on page 1372, and this is the Budde v. Harley opinion,250 F. 3d 1369 at 1372, the court said: "The system of the '348 patent determines electronically ... when each respective cylinder is ready for a fuel charge without having to add a distributor, a cam and switch, or any other sort of electromechanical device to the engine. This not only eliminates having to make mechanical alterations to the engine, but also enables the patented conversion system to be installed on any simultaneously firing V-twin engine." And that's critical and the Federal Circuit also recognized that on page 1373.

It says: "The output of the control unit thus provides the needed timing signals for the fuel injectors without any mechanical modification of the engine." Harley has submitted abundant evidence that we do have significant mechanical modifications of the engine. They have not contested that those mechanical modifications were made. They just don't want to deal with them. And they use the claim construction as a way of trying to get around it.

The fact is and that -- and this is not a red herring, this simultaneous firing versus alternative. Here's why: When you have both spark plugs firing at the same time, one in the charged cylinder and one in the exhaust, you don't know which one was just on the power stroke. All the engine knows is that there are two sparks.

When Harley switched to alternative sparks you can imagine they wouldn't have to take the time duration and try to figure all that out. They could just -- as Mr. Milks said, there are two coils. You could have one wire on each coil and it would say this one just sparked and you would know exactly what phase the engine was in. It's that simple.

The next item I'd like to address, and I think it's best depicted in Exhibit C, is the "fuel injectors mounted in a throttle body." Now, here Plaintiff said that basically it's a dispute of how close the injectors are to the throttle body versus the intake manifold.

If I could commend the Court's attention to Exhibit C in the handout I provided, this demonstrates unequivocally that in the new EFI system the fuel injectors which are numbered 11 in the diagram are mounted in the intake manifold which is numbered 15 in the diagram. And in the submissions we have there's actually -- I should have put in there's another sheet in here with these all labeled.

And then, Your Honor, if you look to the left of that, you find the throttle body. That's part number 8. That's where the throttle is housed.

Now, one cannot look at this diagram -and, by the way, again, no dispute that this is the actual diagram of the new system. One cannot say that mounting the fuel injectors in the intake manifold infringes this patent without again vitiating that claim term in violation of Warner-Jenkinson. The injectors have to be mounted in the throttle body to infringe this patent and Harley's are not.

THE COURT: And that is. a technically significant point. You're not speaking to an engine designer here. You're saying that the location -- because counsel raised the issue of the ports and that whole fight we had a couple years ago. This is a distinction with a difference from your perspective, that it makes a big difference where the fuel injection occurs from a mechanical standpoint.

MS. BEST: Yes, it does. And, I mean, the point I'm making is literally on its face it doesn't infringe. Now, when you get to doctrine of equivalents and start talking about function-way-result, then it's even more significant.

Throttle body injection was an early way of doing it. They would put a carburetor -- remove the carburetor which was located at or near the throttle body and plop injectors in there. Well, you're basically spraying fuel into an air stream that's coming in the engine. It's not very efficient. In fact, it's not that much more efficient than a carburetor.

When you mount the injectors, however, in the intake manifold right adjacent to the cylinders you are firing that fuel on the back of the valve where it is vaporized on the back of the valve and then sucked into the engine when that valve opens. And you do not have all this wall letting and problems that are associated with throttle body injection.

I commend your attention to Dr. Farrell's report. He's an expert, leader in the field on this. He's published widely and he discusses this at length in his expert report.

THE COURT: Mr. Budde's invention converted carburetor engines where the fuel was in the throttle body and the fuel was -- and the fuel injection engines was where the fuel was injected into' the throttle body.

MS. BEST: Correct.

THE COURT: The level of efficiency was the same as between the engines that existed before they were converted and after?

MS. BEST: Well, I think there may be some efficiencies because you are metering out fuel through a little tiny nozzle in an injector whereas a carburetor just sucks as much as it can get.

THE COURT: Sure. But the point about where the fuel goes in and the efficiency you get or don't get based on that is not affected by a converter. In other words, you're still talking about an engine that works with fuel that is added into the throttle body whether it be through a carburetor or a fuel injection system.

MS. BEST: That's correct in his system. That is correct.

The other thing that is apparent from this diagram is that there -- the claim requires a pair of fuel injectors mounted in a fuel injected throttle body secured to an intake manifold. Again, these are separate parts and you have to locate the injectors in one or the other, but it also -- this also -- this chart also enlightens us on an intake manifold providing separate ducts for delivering a fuel and air mixture.

And, Your Honor, if I could have you look at Exhibit D in the packet.

This Exhibit D is actually figure 6 from the patent. This is Mr. Budde's claimed intake manifold with separate ducts and we see right beneath that is language from column 4 of the patent where it says: "The unique configuration of the intake manifold includes the fact that it has separate intake tubes or ducts for each injector whereby there is no crossover of fuel-air mixture between the two injectors."

And then down at the bottom there's another highlighted portion which says the same thing.

Now, contrast this with Exhibit C. As you can see, there was one hole, one tube or duct passing through the throttle body and intake manifold before it branches off to the cylinders. That is not the separateness described in figure 6. That is not the unique configuration that this patent claims and is now trying to be imposed upon Harley.

Your Honor, in terms of the elements, the most glaring lack of evidence is with respect to the controlling unit and that's -- you know, perhaps the only thing that could be argued would be novel in this patent.

This Court said that the control unit identifies the cylinder charging sequence from the measurement of the different time durations between the asymmetrical spark firings. "The control unit must determine which spark plug of the engine is firing a charged cylinder at any given moment based on the different time periods between spark firings."

I submit to you, Your Honor, there isn't one shred of evidence in this record, not one, that shows that Harley-Davidson performs the function of determining these different time periods. There's no evidence, none.

And they want to talk about "electronic sensing means" and what the system might be able to do, but there's no evidence that it does it. Again, you can't find infringement and you can't take an infringement case to a jury without evidence.

By the way, the Federal Circuit also had something to say about that. On page 1374 when referring to the "control unit" it says it performs its function by measuring the time span between successive pulses. Again, no evidence that Harley's does that because it doesn't do it. It doesn't have to because it can pick up the alternating spark.

It goes on to say on page 1374: "The control unit stores the times for comparison to determine the longer and shorter periods. By comparing the differences the desired sequence of cylinder charging is determined by the control unit."

Here again no evidence in the record that Harley-Davidson does that because they don't do it. Finally in terms of infringement, the status sensing means for measuring vacuum in the intake manifold. Mr. Milks is correct in Harley-Davidson's new system, which is more akin to a speed density system in terms of engine management, there is a vacuum sensor in the intake manifold. We don't claimed that there isn't one in the new system.

It still doesn't infringe for all these other elements they pointed out, but that underscores the fact there is no vacuum sensor sensing pressure in the intake manifold in the original system. It doesn't need to do that and we've explained that quite at length in our declarations.

Now, they say a barometric pressure on the sensor on the outside of the motorcycle, which is no different than a weather sensor, tells you what the barometric pressure is and it's there for altitude compensation. At higher altitudes there's certain performance characteristics that diminish in any engine.

And they want to say that that is equivalent to measuring vacuum in the intake manifold. It's not. It does not perform the same function. It's a different way. It's a different result. It's clearly not literal infringement. And here again if this patent is read on to Harley's system where there is no vacuum sensor in the intake manifold, and I'm talking about the original 1995 system, we've vitiated a claim element in violation of Warner-Jenkinson.

There are other things about this lookup table. It may be able to determine -- what he said was it's done at a certain altitude. That doesn't measure vacuum in the intake manifold.

The intake manifold is a dynamically running engine with extremely high temperatures, with valves opening and closing, the pressure is going up and down wildly. It has nothing -- yes, barometric pressure comes into the engine because outside air comes into the engine, but that doesn't mean that that barometric pressure sensor on the outside of the motorcycle is capable of measuring this wildly fluctuating vacuum and conditions within the engine.

THE COURT: okay.

MS. BEST: Your Honor, I think if the Court would indulge me for another five minutes?

THE COURT: I'm concerned about Mr. Russo's schedule.

MS. BEST: Okay.

THE COURT: And I'd like to get him where he needs to go.

Just tell me. What's the additional point you want to make?

MS. BEST: Well, the invalidity case is extremely strong here. Mr. Budde made admissions at his deposition, and I've highlighted those in Exhibit E, that in any other case this should be over on invalidity. In this case the Plaintiff and lead named inventors admitted that he conceived the invention in '84 and '85 and completed it by 1986.

Two other individuals substantially contributed to the invention and were not named as inventors; that by 1986 he had installed his invention on a Harley-Davidson carbureted motorcycle and operated it as a working vehicle. He demonstrated this to the Hot Bike reporter which is –

THE COURT: All right. I'm sorry to interrupt you, Counsel, but again I'm concerned about time. You're saying that apart from all of the other arguments you've made this was out in the public domain before Mr. Budde ever sought a patent?

MS. BEST: Right. Mr. Budde sold and used his invention and – or offered it for sale and used it more than one year prior to the application.

THE COURT: I'm aware of that argument. I'm not giving it short shrift. And I want both sides to understand that by trying to focus the argument today on particular points it does not mean I think the other points are unimportant. These are the ones that I had some confusion about and needed your help with.

MS. BEST: Your Honor, one final point and it's somewhat procedural. Last week we received oppositions to our motions to strike the second declaration of Budde and our motion to strike the Knapp declaration. We have not had time to file a reply.

THE COURT: If you need time to file a reply, I'll let you know.

MS. BEST: Okay. Thank you.

One other thing. They've moved -- on Wednesday of last week they moved for the first time to strike our declarations filed on May 9th in support of our summary judgment of non-infringement. We haven't had time to oppose that.

THE COURT: I'll just tell both sides if I need further briefing on anything, I will let you know.

MR. KELLEY: May we respond very briefly to what Mr. Best said?

THE COURT: You certainly may. Again, I don't want to put anybody out.

Go ahead.

MR. KELLEY: I'll just speak to the points he was addressing.

As to the conversion system, Your Honor, I would commend to the Court the language in the preamble because it sets forth what is really the engine that is being talked about and you'll see what's referred to there is the V-twin, the ignition system, and the fuel source. That defines what's essentially a base engine.

Now, Harley has admitted in the deposition testimony several facts irrelevant to this, Your Honor, and I would draw your attention particularly to --

whether or not you accept our argument that there is infringement in this case, we would strongly urge the Court to find that there's a minimum disputed issues of material fact as to Harley-Davidson's motion.

Mr. White in his deposition testimony at 248, lines 20 to 25 makes clear that

Harley-Davidson has a conversion system.

MS. BEST: Your Honor, I object. He said that was a Harley witness. That's their expert.

THE COURT: well, excuse me. We're not having a trial now.

MS. BEST: Okay.

THE COURT: If you want to point out where in the record there is evidence that supports your position.

MR. KELLEY: I would.

THE COURT: It doesn't matter whose witness it is. So it's Mr. White.

MR. KELLEY: Mr. White's testimony at 248, lines 20 to 25 about the existence of the conversion system and his testimony at page 243, lines 17 to 22 about whether or not the Harley-Davidson is suitable for conversion.

There is also his testimony at page 243, lines 10 to 12 about literal infringement on that point.

Now in the Lodise deposition there's testimony at page 79:14 to 17, and 79:24 to page 88 dealing with the -- the engine that Harley-Davidson uses in its systems. And we would submit to Your Honor that that engine is suitable for carburetion and suitable for fuel injunction and that's enough for it to be a conversion system within the meaning of the '348 patent.

I would also refer the Court to the Lodise testimony at page 67:9 to page 70:23 where he's talking about the differences in the Harley-Davidson models. And the Court can read that testimony for itself and see that what we're talking about is essentially the same base engine that comes in a carbureted flavor or a fuel injected flavor and that -- the Court said in its claim construction order that nothing in the specification -- this is at page 6, lines 8 to 11. "Nothing in the specification indicates, however, that the patent does not cover a fuel injection system designed by an original manufacturer to fit an engine it has previously manufactured only with carburetion."

We're talking about the same base engine. And I'd also refer the Court to Mr. Metz's testimony at page 29, lines 5 to 11 and Mr. Metz's testimony at page 244, lines 5 to 15. We're dealing with the same base engine, both the old system and the new system. The engine has changed, but in both cases it's the same base engine.

THE COURT: All right. It gets back to that definitional issue of what the base engine is.

MR. KELLEY: Now, as to the second point that Mr. Best was talking about, the fuel injector in -- the fuel injector and throttle body, every time Mr. Best gets up here and talks about it -- he does it in his paper. He's done it in his argument today. He says they have to be mounted in the throttle body.

That's not what the patent language says. It says they have to be mounted in the fuel injector and throttle body. And if you would look at the document that he showed you, 6, as to the new system, you know, the induction module, this is what Harley-Davidson itself calls induction module.

This is one unit. This is one body. It may have multiple pieces, Your Honor. I think there are 400 plus bones in the human body. That doesn't mean the human body is multiple body. By the same token the fact that Harley-Davidson itself calls this an induction module does not mean that just because the fuel injectors are mounted as one part of that body –

THE COURT: Right. I follow you.

MR. KELLEY: Let me give you an analogy.

THE COURT: No, you don't need to. It's further upstream, but it's one body. It's one physical object.

MR. KELLEY: And as to the equivalents argument, Your Honor, go back and look at the original device. If they had just cut that original induction module assembly in half, separated the two parts, and said the fuel injector is at one end and the throttle is at another and then glued them back together, that's essentially what you've got with the new thing. They took pretty much the same assembly, cut it up, and they are equivalent.

On this point, Your Honor, as to the existence of where the outlet ports are, I would also direct the Court to the same exhibit that Mr. Best has referred to, number D, where he's talking about the basic elements. He's talking about whether or not this has got ducts, whether or not the new system has got ducts.

Well, look at this chart, Your Honor. The duct reference is 17. It is the outlet port. And if you look at the language at lines 36 through about 38 I think it is -- maybe it's 35 through 38 -- it says: "A small air communication passage approximately 3/16 of an inch in diameter is provided between the tubes in the septum 19 of the intake manifold of the present invention."

What's being talked about in 19 in this chart is, as the patent itself says, the septum. The ducts are 17 and you can look at the pictures of their device. They've got two ducts. They go to separate cylinders. That satisfies the "fuel injector" and "throttle body" issue.

Now as to the "control unit."

THE COURT: And this is the last thing I'm going to be able to hear, Counsel.

MR. KELLEY: Okay. And this is important, Your Honor.

THE COURT: Okay.

MR. KELLEY: I would really ask you to take a look at the Federal Circuit's opinion because this is the issue. The Federal Circuit didn't just clarify the "electronic sensing means" issue. It also in discussing that clarified really what the "control unit" meant and, as the Court said in this case and in the case before this, there is law in the case. The Federal Circuit decision has to be applied.

At page 1347, same page Mr. Best referred to, in column 2 of that, the Federal Circuit notes that there is an equivalents between distance and time. Okay? Time and distance. This is a moving engine. Time means distance; distance means time. The Federal Circuit says: "The varying distance between the cup windows can be translated into the time lapse between the spark plug firing from cylinder 1 to cylinder 2, which is different than the time lapse between the spark plug firing from cylinder 2 to cylinder 1. For example, when the control unit detects a 419 spacing, or time gap, between the windows, cylinder one 1 is to be injected with fuel."

Now I would ask the Court to look very carefully at Exhibit 8 to Mr. White's report. It's this chart. Okay?

And what you will see here is you will see a correspondence between the cam shaft signal which is going up and down and the distance which is reflected in the rotation of the circumference of the fly wheel on both systems, Your Honor. That applies with regard to the rotation of the rotor cup on the old system and with regard to the rotation of the fly wheel on the new.

The court found, the Federal Circuit found that there was this equivalents between time and distance, and whether or not Harley-Davidson says they measure time or they don't measure time, they are certainly measuring the rotation of those two devices, the rotor cup and the fly wheel.

The control unit takes that information. It recognizes an asymmetry between those two measurements for the two cylinders and uses that information.

THE COURT: Okay.

MR. KELLEY: That's enough to establish that there's a control unit here or at a minimum, Your Honor, there's certainly a dispute about the facts.

Thank you.

THE COURT: Thank you. We need to stop. So I'll take this under submission. I will let you know if I need further briefing on any of the matters where the briefing was late and I'll get back to you.

MR. RUSSO: Thank you, Your Honor. Thank you for taking us ahead of everyone else. I appreciate it.

THE COURT: We'll take a five-minute recess and then we'll go forward.

(Whereupon, the proceedings concluded.)

CERTIFICATE of REPORTER

I, Peter Torreano, official court reporter of the United States District Court for the Northern District of California, 280 South First Street, San Jose, California, do hereby certify:

That the foregoing transcript is a full, true and correct transcript of the proceedings had in Budde vs. Harley-Davidson, Inc., Case Number. C-98-20447-JF, dated June 23, 2003; that I reported the same in stenotype to the best of my ability, and thereafter had the same transcribed by computer-aided transcription as herein appears.